NAVAL POSTGRADUATE SCHOOL
Monterey, California

THESIS

COST-EFFECTIVE ALTERNATIVES FOR DISPOSAL OF OBSOLETE NAVY PERSONAL COMPUTERS

by

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June 2000

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13. ABSTRACT *(maximum 200 words)*

The Department of the Navy (DoN) disposes of large quantities of obsolete personal computers (PCs) annually. The methods of disposal are well regulated and predictable. There seems to be little concern, however, for the financial implications of such practices and if there exists cost-effective uses for obsolete PCs. With initiatives to put *new* computers in the hands of DoN employees, no initiatives were discovered that make use of *used* PCs to help meet the need. This thesis explores disposal procedures for obsolete DoN computers and examines if cost-effective alternatives exist. The pending Navy/Marine Corps Intranet (NMCI) initiative is examined (along with PC leasing) since computer disposal could be a significant factor in the annual cost of NMCI. Major conclusions: A PC disposal problem will exist under NMCI, existing regulations do not expedite putting used PCs in the hands of DoN employees and there may be uses for obsolete PCs in Navy Recruiting efforts. Major recommendations: Selling or giving obsolete NMCI PCs to DoN employees thereby reducing the cost of NMCI, an interim suggestion to modify our disposal procedures to include PC issue to DoN employees, suggestions for Navy Recruiting to give used PCs to Delayed Entry Program personnel.

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FOR DISPOSAL OF OBSOLETE NAVY
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Eric J. Tibbets
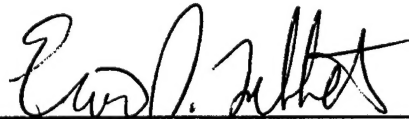Commander, United States Navy
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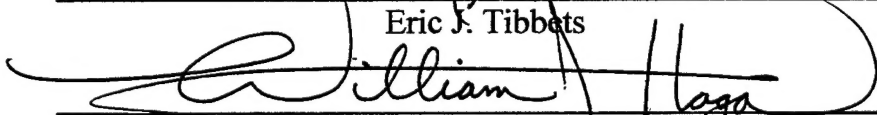
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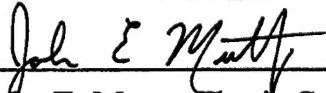**NAVAL POSTGRADUATE SCHOOL
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It has been a humble honor and privilege to attend NPS and, ultimately, all thanks goes to God.

I. INTRODUCTION

A. PROBLEM

Along with the need for faster and more capable personal computers (PCs) comes the ongoing problem of PC disposal. The Department of the Navy (DoN) has a long-established method to dispose of thousands of used PCs that is in compliance with the governing Department of Defense (DoD) regulations. Cost-effective alternatives may exist, however, that make traditional disposal procedures questionable from a financial management perspective. With all the initiatives to provide PCs for our service members and the civilian DoN employees, none were discovered that made use of used PCs.

B. PROPOSED SOLUTION

Due to federal ownership of most of the DoD Information Technology (IT) assets, existing laws and regulations generally do not allow the used DoD PCs to be given to the DoD employees [Appendix E]. With the advent of leasing and the Navy/Marine Corp Intranet (NMCI), the ownership of IT assets will no longer be in the hands of the DoN. Rather, the lessor (or "vendor", the term used to describe the provider of NMCI services) will be free to dispose of the obsolete PCs as he sees fit. This thesis will examine the option of the vendor giving (or selling) the used PCs to the DoN employees, thereby creating a "Navy solution" to the vendor's problem.

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The goal of such a proposed solution is three-fold:

1. To reduce the contract cost of NMCI by mitigating the vendor's disposal problem.

2. To provide good, working PCs to the DoN employees to use as a starter, second or telecommute computer (a possible morale boost).

3. To provide an outlet for efficient, cost-effective disposal of the vendor's PCs.

C. WHAT HAPPENS IF THE PROBLEM IS NOT SOLVED

Under the existing scenario, where the DoN acquires and owns most of its PCs and leasing makes up a small portion of the total, the ongoing transfer of those PCs to entities outside the Navy will continue to exclude Navy employees from the benefits of "Navy" dollars. Without a reasonable conduit to put used PCs into the hands of the DoN employees (which requires a change in the law), the DoN is likely to continue to fall short in funding for initiatives to buy new PCs for its members.

"CyberSeabag" (with its $20 million price tag) and other initiatives to outfit warriors with PCs may fall victim to budget priorities if a solution involving some mix of used PCs is not developed. Further, a viable opportunity to reduce the annual DoN cost of NMCI will be lost if a solution to the vendor's disposal problem does not include selling or giving used PCs to the DoN employees.

D. BACKGROUND

In Fiscal Year 1999, the Department of Defense (DoD) transferred approximately 100,000 personal computers (PCs) with a fair market value (FMV) of $70 million to schools and other non-profit organizations [Appendix A], while transferring only 10,000 PCs to other agencies within the DoD [Ref. 1]. That is, for every ten PCs the DoD transferred outside the department, only one remained within the DoD for use in our national defense effort.

The Department of the Navy (DoN) transferred 43% of its obsolete PCs to schools and other non-profit organizations in FY 99 while transferring 4.5% of its obsolete PCs within the DoN [Appendix A]. The ratio for the Navy then, mirrors that for all the DoD. Again, for every ten PCs the DoN transferred outside the department, only one remained within the Navy/Marine Corps team for use by sailors and marines.

While the used, obsolete DoD and the DoN PCs are finding homes outside the departments at a 10:1 ratio, initiatives to outfit sailors with new PCs have yet to find necessary funding [Ref. 2]. The "PC for Every Sailor" program, which has also been called "CyberSeabag" [Ref. 3], seeks to outfit every uniformed Navy member with a PC. CyberSeabag is included in the FY 2002 budget and expected to cost $20 million [Ref. 3]. In FY 99, the DoN donated some 16,000 PCs to schools with a FMV of $5.8 million and an acquisition cost of $18 million [Appendix A]. Although those 16,000 PCs are not new, they were functional PCs

capable of tasks and applications that might suit the immediate personal computing needs of sailors and partially meet the goals of CyberSeabag. While many of those computers were no longer capable of the fastest processing or computer applications, they might have been sufficient in the hands of soldiers, sailors, airmen, or marines as a starter computer or second computer at home.

Several national initiatives exist to provide *new* computers for federal workers and members in uniform [Ref. 4]. None of the initiatives researched, however, have explored the use of *used* computers to fully or partially meet the objectives. The need for PCs in the hands of war fighters goes beyond the workplace and into the realm of personal use.

> The Navy intends for sailors to use the computers primarily for personal use. The CyberSeabag program is an acknowledgment that future recruits have grown up using computers and the Internet and that a computer can be a valuable recruiting tool [Ref. 3].

Additionally, computer acumen will become an important war fighting skill and could make the difference in time of conflict.

> The CyberSeabag program will help prepare sailors for the Navy's strategy to fight future wars using computers, [DoN Deputy CIO Ron] Turner said. The Navy is preparing for what it calls network-centric warfare, in which tactical intelligence and logistics information sent over computer networks becomes as much a weapon for the war fighter as light arms or heavy armor. [Ref. 3].

With the imperative for information from tactical intelligence to logistics, all members of the war fighting team, military and civilian, must achieve and

maintain computer expertise. When the initiatives only include new equipment without examining the complement of used PCs, however, the likelihood of funding is decreased. Therefore, initiatives involving used computers will be explored.

In order to define the extent of the issue, this thesis will examine existing laws and regulations, current costs and practices for managing IT assets, and whether any conduits exist to put replaced IT gear in the hands of the DoN employees, from the newest enlistee to the civil servant to the seasoned war fighters.

E.   THE RESEARCH QUESTIONS.

1.   Primary

Are there more cost-effective alternatives for the disposal of obsolete IT equipment?

2.   Secondary

1.   How much IT equipment is disposed of annually by the DoN and what becomes of it?

2.   What are the laws, rules, regulations and procedures for disposal?

3.   How do other large/similar organizations dispose of obsolete IT equipment?

4.   Could the used IT equipment be put to better use and benefit the Navy either financially or from a morale standpoint?

5.   What are the financial implications for disposal and re-use of PCs under NMCI?

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II. CURRENT PROCEDURES

A. MANAGING, REPORTING AND DISPOSING OF IT EQUIPMENT

The Defense Information Systems Agency (DISA) oversees the managing, reporting and disposing of all the DoD IT equipment. DISA maintains an inventory of the DoD IT assets and has the primary responsibility for screening and redistributing the excess DoD IT equipment. DISA uses two vehicles to carry out their functions, DARMP and DITMS [Ref. 5].

1. Defense Automated Resource Management Program (DARMP)

All the DoD commands and organizations are required to maintain a current inventory of their IT equipment via the Defense Automated Resource Management Program (DARMP). DARMP is a component of the Defense Information Systems Agency (DISA) and was implemented in response to Federal initiatives to manage IT resources. DoD Directive 7950.1 tasks all military departments to participate in DARMP and SECNAVINST 5238.1C directs all Navy activities to comply. DARMP maintains a central repository of IT asset inventories for the DoD-wide computer hardware. Currently, the Active Inventory in DARMP has some 2.5 million items valued at $13 billion [Ref. 1]. The goal of DARMP is to maximize the use of the DoD IT assets by redistribution, excess capacity sharing, and donation of excess IT assets to educational institutions.

2. Defense Information Technology Management System (DITMS)

Effective 14 August 1998, DITMS was designed to provide automated support for DARMP to collect and manage IT resources within the DoD. IT assets

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that become obsolete and are in serviceable condition are reported to DITMS for redistribution screening. For a 30-day screening period, DITMS users can place a reservation on IT assets to indicate a desire to transfer the asset to another federal activity or an educational institution. During that 30-day period, eligible users, based on a priority system, (see Table 1, below) can request transfer of that PC, for example, to their command.

Table 1. DITMS Re-Distribution Priorities

Priority	Organization	Screening Day
1	Agency That Reported Excess	1
2	Other DoD Agency	15
3	DoD Contractors	15
4	ROTC/JROTC Organizations	15
5	Civil Agencies	20
6	Civil Agency Contractors	20
7	Law Enforcement Organizations	20
8	K-12 Schools in Empowerment Zones/Enterprise Communities	25
9	Head Start/pre-K-12 Schools	25
10	HBCUs/MIs	25
11	Non-Profit Organizations w/Education Mission	25
12	Federal Donees	25

The priority system is set up to favor the agency reporting the excess equipment and then the DoD in general. Most agencies have an informal means to re-distribute excess IT assets within the command and therefore those assets are not listed in the DITMS excess catalog.

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The gaining command must pay for shipping (or arrange pickup) of the PC. From 1-30 days, the equipment is categorized as "excess" and after 31 days, the equipment is categorized as "surplus." After the 30-day screening period, if no agency identifies a desire for the excess equipment, the equipment can be donated to schools ("Computers for Learning") or sent to the Defense Reutilization and Marketing Service (DRMS) for further disposition [Ref. 7].

A recent DITMS Excess Catalog (Appendix B, Part 1) lists thousands of pieces of IT equipment available at various sites within the DoD. Particularly noteworthy are the 15 handheld computers, 1,565 Pentium 60-133 MHz desktop PCs, 54 Pentium 150-200 MHz desktop PCs, 74 portable (presumably laptop) Pentium 60-133 MHz computers, and 722 laser printers. The method of obtaining a piece of equipment from this catalog is also listed in Appendix B, Part 2.

Since this catalog is constantly updated, the mix and quantity of available equipment is dynamic. Each of these items must be listed with regard to working condition. Therefore, not every listed piece of excess IT gear will necessarily be available or in good condition. Nevertheless, the DITMS catalog represents a wealth of equipment, readily available to the Navy. Interviews conducted during the course of this research indicate a lack of knowledge in the Navy about the DITMS Excess Catalog and the means by which a Navy command could receive some of the listed equipment. Due to the low number of Navy locations listed, it

can be safely assumed that few Navy commands are listing their excess IT equipment with DITMS for redistribution.

If there were a means (through DITMS) by which the DoN could get excess IT gear into the hands of its sailors for personal use, perhaps fewer PCs would be transferred to schools. Certainly fewer excess computers would remain in the DITMS Excess Catalog, eventually ending up outside the DoD and resulting in a zero return on investment.

Operating costs for DITMS were deemed "proprietary" by the administrator [Ref. 8], so it is difficult to determine the relative efficiency of this operation. Because it is largely automated and merely a managed database, there are only three to four people employed full-time to manage the program. Since every command has an authorized DITMS point of contact assigned to input data into DARMP and access the DITMS excess catalog for IT equipment, the data input in DITMS is done largely by activities in the field. Since the data entry is done (in theory and by directive) by every command in the field, labor and administrative costs at DISA for DITMS should be relatively low.

A recent study by the Defense Logistics Agency (DLA), Operations Research and Resource Analysis (DORRA) [Ref. 9], examined the most cost-effective way to handle *excess* (1-30 days) and *surplus* (31+ days) computer equipment. All the excess and surplus DoD equipment besides IT equipment is processed through DRMS. Since DLA is the parent agency for DRMS, the study

was done to determine if DRMS could better handle the task of re-distributing excess and surplus IT equipment.

The DORRA report listed the following operating costs for DISA/DITMS for FY 97:

Labor (Salary & Benefits)	$257,400
Non-Labor	28,500
Contractual	258,000
Total costs for FY97	$543,900

For the same period (FY 97), DISA/DITMS processed some 400,000 computer equipment items [9]. So, at approximately $1.36 per item, the costs to DISA for managing the DITMS process do not seem prohibitive. Whether it is a function that should be folded into DRMS is a topic beyond this thesis.

DITMS IT Transfer Statistics

Per Appendix A, the Defense Department, via DITMS, transferred a large quantity of IT equipment during FYs 98, 99 and 00 (through 20 April 2000). During those periods, the Navy and Marine Corps combined for some 16% of the total transferred to non-profit organizations, minority institutions, pre-K through 12 grade schools and historically black colleges and universities. These statistics do not cover the other common destinations for excess IT gear. Those other destinations include DRMS, Intra-agency, Other DoD, and Non-DoD units.

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In order for schools to show interest in the equipment, it must generally be in good operating condition and somewhat capable. Therefore, it is a safe assumption that the equipment transferred to schools by the Navy and Marine Corps was in good working order. That equipment might have been useful in the hands of our war fighters as their personal property and as a suitable alternative to procuring new computers for the DoN employees

Referencing the Navy data, [Appendix A, Part 4] just over half of the excess IT equipment (51.33%) reported through DITMS is turned into DRMS for further processing (see below). 43.34% is transferred to the aforementioned schools and non-profit entities. The remainder is spread amongst Intra-Agency (between Navy units), Other DoD (military branches of service, etc.), and Qualified Non-DoD Federal Agencies. Combining Intra-Agency unit transfers with Other DoD units yields a small percentage. *Note that less than 5% of the excess goes to other DoD agencies.* There seems to exist a far greater propensity for Navy units to transfer excess IT gear to schools than to re-distribute within the DoN and the DoD.

An algorithm in the DARMP software determines Fair Market Value (FMV). Appendix A, Part 5, summarizes the FMV for Navy and Marine Corps IT assets and computes an estimated average FMV percentage of 33%. That is, the average FMV is 33% of acquisition cost for Navy and Marine Corps excess IT assets during the period.

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3. Defense Reutilization and Marketing Service (DRMS)

DRMS is responsible for reutilization, transfer, donation and disposal (which includes sale and scrap) of most excess and surplus DoD property. The involvement of DRMS with the DoD IT equipment occurs only after the DISA/ DITMS 30-day screening process. When a piece of IT equipment is not re-distributed to an eligible agency or donated to a school through DISA and its DITMS process, it is then sent to DRMS via the nearest DRMO (Defense Reutilization and Marketing Office). DRMS then has several options at hand. Some of the DRMS options include re-using the equipment within the DoD or law enforcement agencies, transferring the surplus equipment to other federal agencies or donating to state agencies (the DLA/DORRA study stated that the foregoing is largely a duplication of the previous efforts of DISA/DITMS). Finally, DRMS can downgrade the property to scrap or sell it at public auction through their local DRMOs.

From FY 95 to 99, DRMS received some $5.4 billion (acquisition cost) of excess IT equipment from all the DoD sources (Appendix C, Part 1). They then provided for reutilization, transfer, donation, sale and scrap for the received equipment. According to DRMS personnel [Ref. 10], the following simple formula should apply:

(Turn-Ins) - (Reutilizations) - (Transfers) - (Donations) – (Sales) – (Scrap) = Zero

The remainder from the transactions, then, should always equal zero. As the figures in Appendix C, Part 1 indicate, however, the "Unexplained" remainder totals more than $500 million for the five-year period. FY 95 and FY 99 account for the majority of the discrepancy. Several requests to DRMS for explanation and amplification of the discrepancies were not answered adequately enough to clarify the out-of-balance results.

The US Navy accounted for approximately 23% of the total IT equipment turned in to DRMS during the period, [Appendix A, Part 2]. Since the "pool" of equipment becomes generic after it is received, there is no way to track what becomes of the Navy turn-ins. A safe assumption would be to estimate that approximately 23% of all categories are made up of Navy-origin equipment. That is, 23% of the IT equipment transferred, donated, sold, etc. came from Navy commands.

When the equipment is unusable, it is downgraded for scrap. The remainder is sold, normally at public auction, through the many DRMO locations worldwide. Over the five-year period from FY 95 to FY 99, the average rate of return on the acquisition value was 0.65%, [Appendix C, Part 3]. While acquisition cost may be an erroneous measure (especially for IT equipment), it is the only valuation that DRMS uses. Unlike DARMP/DITMS with the FMV algorithm, DRMS maintains their records with acquisition value.

A rate of return less than one percent can be a result of many factors. Certainly the condition and age of the equipment might be the two most dependable indicators of the low rate of return. Though DRMS attempts to make the surplus equipment available for quick sale, IT equipment is especially vulnerable to delays.

If the IT equipment were available for sale at a much earlier juncture, a rate of return far greater than 0.65% could be achieved. For example, per Appendix A, Part 5, we see that the average FMV of Navy and Marine Corps IT equipment for the last three years is 33% of acquisition cost. (As a reminder, DARMP derives FMV by way of an algorithm as part of their database). If, at the DARMP/DITMS juncture, the Navy's IT equipment is still worth a full third of its acquisition cost, it makes little economic sense to retain the equipment within the federal government only to sell it many months later for less than a penny on the dollar.

B.   CURRENT COST OF PC HARDWARE

In order to measure the magnitude of the Navy/Marine Corps PC inventory, we must look first to the concept of "seats."

> A 'seat' for this analysis is defined as the computer (e.g. desktops, laptops) and the functions and services that accompany the asset including help desk, system support and network connectivity. A 'seat' is *not* defined as an account or an individual end user. These assumptions parallel the assumptions made in the Marine Corps IT Utility Study. [Ref. 11]

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While the concept of seat encompasses more than merely the PC, it is the common terminology used to compare alternatives and measure the cost of operations. Although the seat includes services beyond the PC, the number of seats in the Navy and Marine Corps must, obviously, equal the number of PCs (since laptops make up such a small portion of the total inventory, the term PC will be applied to both the desktop and laptop personal computer). So an assumption is made that there is a one-to-one relationship between seats and PCs.

A study by two consulting firms [Ref. 11] sampled the Navy and Marine Corps inventory of PCs. As a portion of the study, direct cost data were gathered in four areas (indirect costs such as security were not addressed in this study). The four cost elements were:

1. Hardware

2. Software

3. Operations

4. Administration

"Based on the extensive data collection, an annual cost per seat was calculated for each of the sites based on the total annualized cost in each category divided by the total number of seats"[Ref. 11]. The following table provides a summary cost per seat for the 18 sites surveyed.
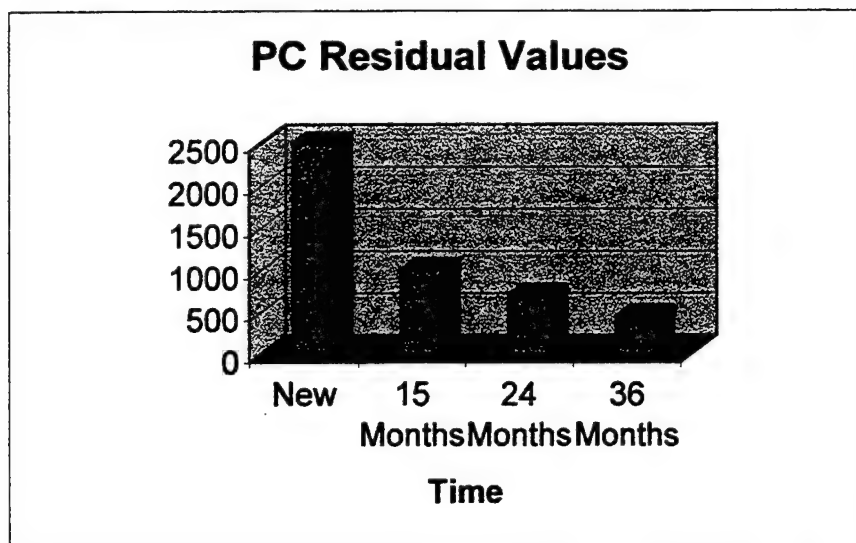
Table 2. Sample Survey of IT Cost Elements

Driver	Site 1	Site 2	Site 3	Site 4	Site 5	Site 6	Site 7	Site 8	Site 9
Hardware	$781	$483	$959	$738	$933	$2572	$845	$918	$1552
Software	529	20	735	337	83	426	272	110	841
Operations	1011	495	4621	1742	974	881	2527	1321	3686
Administration	279	115	820	1333	245	591	519	96	611
Total Direct Costs	$2599	$1113	$7134	$4169	$2236	$4471	$4163	$2453	$6690

Driver	Site 10	Site 11	Site 12	Site 13	Site 14	Site 15	Site 16	Site 17	Site 18
Hardware	$574	$915	$525	$670	$934	$1714	$614	$2983	$617
Software	227	228	339	219	388	110	143	424	29
Operations	1078	1457	1674	2359	1094	3236	2111	1679	1645
Administration	692	223	383	472	247	609	305	121	647
Total Direct Costs	$2571	$2822	$2921	$3721	$2663	$5869	$3172	$5207	$2937

The cost per seat for hardware (the category relevant here) across the 18 sites ranges from $483 - $2983 with an average cost per seat of $1,086.

Hardware is not a primary cost driver because of government labor rates, age of assets, and calculated annualized depreciation used for this survey. The Navy, like the Marine Corps, benefits from significantly reduced rates for purchasing hardware (e.g., desktops). For example, a large government agency can receive a discount of 30% from the GSA Schedule. Recognizing that the government generally expenses its hardware, straight-line depreciation over five years was used to calculate an annualized cost. [Ref. 11]

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The referenced study [Ref. 11] used five-year depreciation of personal computers in all its analysis. While five-year depreciation may be relevant for many government assets, it bears little resemblance to the actual cost behavior of PCs. While depreciation is not intended to reflect the decline in market value, there should not be such a wide disparity as in this case. For example, a three-year old PC is worth approximately 20% of its original purchase price as illustrated by the following figure [Ref. 12].

Figure 1. Residual Value of a Personal Computer

According to the DoN Information Network Program Office (INPO), the warranties on the PCs in the Navy/Marine Corps inventory are for a period of 36 months. After the warranty period, there is a $300 service call fee charged for the maintenance technician to make a site visit. The $300 service call fee is in

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addition to any labor charges or parts required. [Ref. 13] Referencing Figure 1, above, one can see that the residual value of the PC concerned is possibly less than the cost of the service call fee and most likely less than the total cost of the service call (service call fee, labor and parts).

Since a depreciation period of five years seems unreasonable for a PC with less than 20% of the original value remaining after three years, then what period of time makes the most sense? The aforementioned study by Booz Allen Hamilton used five-year straight-line depreciation but offered a sensitivity analysis for other scenarios. The results of that analysis (average, 18 sites) are listed below [Ref. 11]:

Table 3. PC Depreciation Schedule

Average Hardware Seat Cost	5-year depreciation 4-year depreciation 3-year depreciation	$1,086 $1,357 $1,810
Hardware as % of Total Direct Costs	5 year 4 year 3 year	30.1% 34.6% 40.7%
Percent Change in Total Costs (Impact)	5 versus 4 years 5 versus 3 years	108% 120%

So if three years does not cover the service life then five years goes well beyond the service life of the computer. There is no industry standard for a PC service life.   While the computer may continue to have some usefulness, it is not akin to an automobile that has a constant demand on its utility. Rather, the PC will

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have increasing demands for processing speed, storage capacity and display ability. Perhaps a service life slightly beyond three years (based on Figure 1) makes the most sense. For the purposes of this thesis, a service life will be defined as less than 20% of residual value remaining. That is, if a PC is worth less than 20% of its acquisition cost at the three-year point, it can be expected to continue to depreciate at a rapid pace. Although the data do not extend to the four-year point, it can be assumed that there is a very small percentage of the original value remaining at the four-year point. If we assume a service life of four years, we ignore the impact of the warranty expiration (normally occurring at 36 months) and the related service costs associated with maintenance. (No statistics were collected on actual service costs beyond the three-year warranty period because of the propensity for Navy commands to replace their PCs at or just after warranty expiration. [Ref. 13].)

When we acknowledge that less than 20% of the original value remains at three years and factor in the out-of-warranty maintenance costs, the most logical depreciation period to select is three years. (Since commands dispose of computers at different points in the life of the PC, it is impossible to determine the historical service life of Navy PCs. Therefore, three-year service life is used only as a common point of reference for illustration purposes. Recommending when to replace the DoN IT assets is beyond the scope of this thesis.)

Referencing Table 3, above, we note that hardware, as a percent of total direct costs, is 40.7% on a three-year depreciation schedule.

"An estimated $1.5 billion is spent per year by the Department of the Navy to provide IT services to the desktop"[Ref. 11].

If $1.5 billion is spent per year on IT services by the DoN, then (assuming three-year depreciation) the total annual hardware cost is approximately $610,500,000 (40.7% of $1.5 billion).

The total IT budget (in millions of dollars) for the DoN for FY 99-01 [Ref. 14] is:

FY	IT Budget
99	$3,018.3
00	$3,028.7
01	$2,914.0

Based on the annual IT budget, services to the desktop PC account for approximately 50% of the total IT budget. Therefore, due to the large percentage (and large dollar value) that PC services represent, all alternatives to reduce their annual costs should be explored. Whether the DoN continues to own, lease or purchase IT services through NMCI, PC hardware costs will remain high for an organization the size of the DoN. That is, even if the Navy no longer plans to own IT assets, the high costs associated with PC hardware will be transferred (however

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indirectly) to the DoN. If the Navy could introduce means to reduce the costs of PC hardware for the vendor, such as allowing the DoN employees to purchase the replaced PCs, conceivably, the annual operating cost to the Navy could be reduced.

PC Disposal Costs

While no accurate DoD data exist on the cost per PC for various disposal scenarios, there are costs associated with the procedures. Figures from the DoN Deputy Chief Information Officer, Information, Systems & Technology reflect private industry costs as follows: [Ref. 25]

Table 4. PC Disposal Scenario Costs

Cascade within the organization	$397
Donate to charity/others	$343
Throw away	$216
Give to employee	$173

These figures indicate that it costs twice as much to donate the PC to charity as it does to simply give it to the employee. Additionally, it costs $43 (25%) more to throw away the PC than to give it to the employee. While no amplification on the above figures was available, the entire scenario could be likened to a tree falling near one's house. That is, several options of disposal exist to the homeowner. The least costly option might be to give away the wood for free as firewood rather than to keep it on the property or pay to have it hauled away.

Although no direct conduit exists to give a DoN computer to an employee, the Navy routinely cascades computers within organizations, gives them to charity and disposes of them as scrap (throw away). *The least expensive alternative listed, that of giving the computer to the employee, is not currently available to the Navy.*

C. "COMPUTERS FOR LEARNING"

The "Computers for Learning" program was originated by Executive Order 12999 (signed 17 April 1996) and emphasizes four areas of concern:

1. Making modern computer technology an integral part of every classroom.

2. Providing teachers with the professional development they need to use new technologies effectively.

3. Connecting classrooms to the National Information Infrastructure.

4. Encouraging the creation of excellent educational software.

This thesis will address only point one and its relationship to computer disposal and re-use.

The "Computers for Learning" program places additional emphasis on the transfer of obsolete computer equipment to schools, particularly those schools and nonprofit organizations located in lower income communities. While federal agencies (including the DoN) had already been transferring obsolete computer equipment to schools, the wording of this Executive Order made the practice more

expedient. A resultant effect on the DoN, whether that effect is intentional or not, has been to transfer far more computer equipment to schools than to other federal agencies or components within the DoD. The popularity of "Computers for Learning" [Ref. 15], both from a recipient standpoint and from a donor perspective, has created an environment averse to alternative means of disposal and re-use.

Military members live and work in the communities where they are assigned. Their children attend schools in the vicinity and those schools are well aware of the "Computers for Learning" program. As a result of the program's popularity, many computers are sent to schools rather than other places where the computers could be used.

This problem is more one of culture and practice than of regulation. DITMS/DARMP excess procedures require a rigid priority system that, when properly followed, gives a higher priority to the DoD components (and others) than to schools (Table 1). The local commands are giving computers to schools at ten times the rate they give back to the DoD. That is, while some 10,000 computers per year are transferred within the DoD via the DITMS process, some 100,000 computers per year are transferred to "Computers for Learning" [Ref. 1]. Certainly many of the computers transferred to schools were not technically capable enough to do the job within the DoD. Although some of those transferred computers might be adequate in the hands of a first-time computer owner, such as

a new enlistee. Additionally, many of the 100,000 computers transferred to schools could have made adequate second computers for many sailors, their children or relatives to use for such things as e-mail while the member is deployed.

An interesting element of "Computers for Learning" is found in Section 3 (c) of Executive Order No. 12999:

> Nothing in this order shall be interpreted to bar a recipient of educationally useful Federal equipment from lending that equipment, whether on a *permanent or temporary basis* (emphasis added), to a teacher, administrator, student, employee, or other designated person in furtherance of educational goals [Ref. 15].

So once the computer equipment is transferred, the school is free to do with the equipment as it sees fit. Having title to the computer equipment should allow such latitude. Notice the italicized portion, above. The school is free to "give" (permanent loan) the computer equipment to any person fitting a wide definition (in furtherance of educational goals). The Executive Order specifically mentions teachers, students and employees. Presumably janitorial staff, parents or other relatives could qualify as an "other designated person" under the Order.

D. LAWS AND REGULATIONS

In order for the DoD to dispose of used PCs in the fashion it does, there are numerous laws and regulations allowing it to occur. Though many laws govern federal procurement and disposal, the absence of a law that prohibits an act does

not mean that the act is permissible. That is, the absence of a law prohibiting the sale or gift of used computers to the DoN employees does not mean it would then be allowable. Specifically:

> I don't think you are going to find any laws that specifically state that it is illegal to sell DoD equipment to service members. The government is granted certain authority to do certain things by various 'statutory authority.' If there is no statute permitting something, the government does not have the power to do it. Some people would like to think that if there is not a statute prohibiting the government from doing something, then it is OK to do so. That is not the case. That can get you into trouble. Ours is a government of enumerated powers. (The government only has such powers that are specified.) There is a statutory authority to dispose of government property. Those statutes and regulations state what is permitted. If the method of disposal is not in either the law or the regulations, it is not to be done. The laws state how DoD equipment will be disposed of, and if those procedures are not followed, then you have an 'illegal action.' [Ref. 17]

We are then left with the guidelines on how to legally dispose of used PCs. There are numerous laws and regulations that govern the disposal and re-use of all government property. IT equipment is covered under many of those same directives. While many of those laws are listed in Appendix E, the most pertinent directives for the DoD commands are the DoD 7950.1-M and the Draft DoD 8000.X-M.

E.   DON INPO INITIATIVE

The DoN Information Network Program Office (INPO) has begun to issue obsolete and replaced PCs to Navy employees in their command. The impetus for this program was a desire by the INPO Program Director to cease warehousing

replaced IT assets and start a Just-In-Time approach, whereby the old machines would leave the day the new machines arrived. Appendix D contains an example of their hand receipt or property pass for the government-owned equipment.

Many attributes of the DoN INPO program have received favorable support from those within the DoN who see a similar need to stop using replaced PCs as "closet fill." Telecommuting is now possible for INPO employees who are authorized to do so and are issued a computer. The receipt (Appendix D) further instructs the employee that no further maintenance or support of the equipment will be provided by INPO, releasing INPO from the otherwise ongoing burden of computer support.

Most of the computers available for issue through INPO are the Hewlett-Packard® Vectra VL 5/100 MT business model, which has been chosen as the benchmark model throughout this study. The PCs still belong to INPO, must be surrendered upon termination of employment, and the computers' existence and condition will be verified annually.

Though this initiative is the best model found in the DoN, the INPO Program Director pointed out shortcomings that could be rectified to make the plan work easier. For example, the equipment title must still reside with the government (Navy). There currently exists no means to transfer title directly to the employee due to existing laws and regulations. If title could be transferred to the employee once a benchmark fair market value (FMV) was reached, then the

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administrative burden would be reduced. This might also create incentives for an employee to remain with the command a longer period of time, that is, at least long enough to assume title to the PC.

Selecting a benchmark computer, one that is readily deployed in the Navy, and comparing the FMV of that computer to costs of various disposal alternatives can make an illustration of the situation. The Winter 2000 FMV for the HP Vectra VL 5/100 MT computer is $64 (used retail), $34 (mint wholesale) and $18 (average wholesale) [Ref. 16]. (These figures represent a computer void of any software and should be viewed in that light. See V. Software Issues.) Since no usable cost management data exist for government disposition of computers, referencing the International Data Corporation figures [Table 4] that used retail FMV ($64) is approximately one-third the cost to give the computer to the employee ($173). Therefore, if a simple benchmark figure could be reached, for example, when used retail FMV falls to equal or below the cost to throw away the PC ($216), allow the employee to keep the computer. That would require a regulation that parallels Executive Order No. 12999, "Computers for Learning."

Another acknowledged shortcoming of the INPO initiative is the local property pass. If, instead, the employee could be issued a "global" property pass, the PC could move with the employee (assuming they remain with the Navy, uniformed or civilian). Another view might be to consider the PC as Government Issue, much like an aviator's flight gear that remains in one's custody throughout

one's career. Again, both of these possible solutions would be aided by an amendment or new regulations that allow the employee to take title (as above) based on a measure matched to FMV. For the uniformed member, the clothing allowance could be adjusted to allow for the used PC, an idea borrowed from the CyberSeabag initiative. [Ref. 3]

Full-Time Equivalents (FTEs), for example, can relate to possible cost savings associated with employees taking home a used government PC. If the employee's hourly burdened cost is taken into account, it does not take long to cover the FMV of the computer if the employee uses it at home to accomplish work-related tasks. (Although never a mandate of the program, it is assumed that, even for non-telecommuters, they will accomplish some cursory level of government service while at home on the "issued" PC). For example, if the FMV of the computer is $64 (used retail) and the hourly wage is $35, it only takes two hours of checking e-mail from home, for instance, to cover the value of the PC. The following sample yearly wage rates illustrate some possibilities [Ref. 11]:

Table 5. Sample DoN Burdened Costs and Hours to Cover a PC

Grade	Burdened Cost	Hourly Rate	Hours to cover FMV of PC
E-6	$51,827	$29.18	2.19
O-4	$96,842	$54.53	1.17
GS-9, Step 5*	$49,630	$27.94	2.29

*Unpaid overtime for the GS-9 is illegal and included for illustration purposes only.

So, even at the lower or middle pay grades, the FMV of the used PC can be quickly recovered if the employee spends a small amount of time using the obsolete equipment in the pursuit of government-related endeavors. Although uniformed personnel are paid salaries and not hourly wages and do not receive overtime, they are not "on the job" 24 hours per day/seven days per week while shore-based. If, on some of their off-time, they are able to self-educate via one of the new on-line courses offered by the Chief of Naval Education and Training (CNET), view Navy websites or simply increase their overall computer skills, the same return could be assumed on the used PC.

III. NAVY/MARINE CORPS INTRANET

A. BACKGROUND

The Navy/Marine Corps Intranet (NMCI) is the initiative that will revolutionize the way we think about computer system procurement and services. The goal of NMCI is "to provide enterprise wide end-to-end information network capability" and "improved voice, video, and data service to all Naval activities enabling process improvements in warfare and warfare support" [Ref. 28]. Both Hardware and software will be affected in order to "Provide an information technology infrastructure that will ensure information superiority and connectivity throughout the DoN" [Ref. 30] under one service provider with common systems. No longer will we purchase computer equipment in a non-uniform fashion with no standards of performance between commands, or similar specifications and compatibility. Rather, with NMCI, we will only be purchasing a *service* from a vendor while no longer buying, maintaining, upgrading or disposing of computer hardware. Under NMCI, the vendor owns all the hardware (and software) while the Navy/Marine Corps team will be paying only for the services provided by the wide-area network. The timeline for the NMCI is to have basic services for Navy claimants by the end of CY 2001 and full operating capability by the end of CY 2002 [Ref. 30].

"Under a five-year, $10 billion contract expected to be awarded in June, the Navy would spend $1.8 billion per year to purchase basic information and networking capabilities for 360,000 desktops called 'seats'." [Ref. 31]

The impetus for NMCI is in the multitude of networks and systems that provide connectivity and security challenges to the DoN.

> 'Today, what we find ourselves with in the Navy ashore is multiple networks,' Admiral Mayo [Director of Space, Information Warfare and Command and Control] said, noting 'they have brought us technical inefficiencies and interoperability challenges.' He added that 'because we have numerous networks, we have some vulnerabilities, more vulnerabilities than we should.' While the Navy believes it currently has adequate security in place to address today's threats, Admiral Mayo said, 'the threat is becoming more sophisticated', necessitating the move to a NMCI system. [Ref. 31].

One way to explain the NMCI concept is to liken it to a lease concept. The Navy and Marine Corps, rather than owning computer hardware, will pay for the service provided instead. NMCI is similar to IT leases in use today, except that NMCI is for the entire DoN. Ownership of all hardware, software and related equipment will fall on commercial vendors outside the DoD. Though the lease example resembles NMCI, because of network infrastructures, it falls short. With a lease (a classic example is a car lease), the lessee returns the item at the end of the lease and is no longer bound by the lease and no longer has the services of the product. With computers and computer networks, however, a vast infrastructure exists which cannot be removed at the end of the lease period.

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The power meter on the side of a house can illustrate NMCI. The meter, cable, conduit, etc. belong to the power company that is responsible for installation, maintenance and ultimately, disposal. The homeowner, on the other hand, is not responsible for the meter, etc. (hardware) but pays only for the service (electricity). "[Secretary of the Navy] Danzig...writes that the intranet will be procured like the Navy buys 'other types of utilities' such as water and electricity" [Ref. 32].

While NMCI closely resembles the home power meter example, it is paid for on a fixed price contract. So, if we modify the home power meter example to imagine it as a five-year fixed price arrangement, it would closely mirror the NMCI concept.

An important element of NMCI is the concept of Service Level Agreements (SLA). In order to design a service contract under which each party agrees to the level of service, standards must be listed. The SLA defines the requirements that the vendor must meet in order to comply with the NMCI contract and receive payment. Many, very specific SLAs are part of the NMCI contract and they list the minimum level for IT services the vendor must maintain.

The ability of the vendor to meet the stringent SLAs required of NMCI will be greatly affected by the condition and proficiency of the PC hardware. There is likely to be a continual update or refresh process ongoing in order to satisfy the SLAs. In concert with the updates, it is likely that the vendor will be faced with a

PC disposal problem very similar to the magnitude of the one that the DoN faces today.

B. WHAT IMPACT WILL NMCI HAVE ON "COMPUTERS FOR LEARNING?"

Since NMCI is a system based upon vendor-owned equipment, the computer disposal problem will no longer be a problem the DoN must solve. Rather, the disposal problem will be wholly borne by the vendor and its sub-contractors. When NMCI is fully deployed, surplus Navy computer equipment, as we know it today, will change dramatically. The DoN will no longer be supplying obsolete computers to the schools. Since the vendor's plan, if any, has not been disclosed, there is a possibility that no more used DoN computer gear will be available to "Computers for Learning." This could be tantamount to a total pullout by the DoN from the "Computers for Learning" program. Whether this has been viewed in such a fashion is unknown, but the resulting situation will see the Navy's participation diminish greatly. The NMCI vendor is not covered by the Executive Order, of course, and is free to dispose of the obsolete computer gear in any fashion he chooses. The means by which the vendor would choose to transfer the obsolete NMCI computers to schools will likely be different from those in "Computers for Learning" and might cause additional financial burden on the vendor.

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IV.   PRIVATE INDUSTRY PRACTICES

Perhaps to better understand the way a business might approach the topic of PC disposal and re-use, we should take a look at a particular company's solutions. Additionally, in the case of many corporations that try to maintain a high-tech competitive edge, there is the problem of employee computing proficiency and the best way to enhance that expertise. Many major companies today are selling or leasing computer systems to employees at discounts. Still other companies are giving computer systems to their employees as a benefit of employment [Ref. 18]. Since the Navy (and all of the DoD) wrestle with similar issues, it might be instructive to explore how one successful high-tech corporation is disposing of PCs and providing computers to employees.

A.   INTEL®'S DISPOSAL/DONATION AND HOME PC PROGRAM

While Intel is the world's leading manufacturer of computer processors, they do not manufacture PCs. They must acquire PCs in much the same fashion as the Navy. Those PCs become obsolete at the same rate as Navy computing assets. Then Intel is left with finding the most efficient, effective or expedient means of PC disposal.

Since a tax deduction exists for Intel to donate used computers to schools, for instance, then the incentive to donate rather than dispose might increase. As such, one of the most prolific programs at Intel is its school donation program.

"Over the course of the last year, Intel has donated approximately 100,000 PC's, processors, motherboards and computer peripherals to various schools and educational facilities throughout the U.S." [Ref. 19]

The means that Intel uses to refurbish and distribute many of their donated PCs is an Oregon-based program called StRUT (Students Recycling Used Technology). [Ref. 19]

> StRUT is a program incorporated into schools where the students take donated computers and computer components and upgrade them for use in schools. Students involved in StRUT evaluate, repair and refurbish donated computers and in turn donate those computers to local schools. Students gain valuable skills and schools get free computers. Intel has donated more that $7 million in used and surplus computers and peripherals to this program. [Ref. 19]

Intel has a program to give high-end computers to its employees. The program features a free Pentium® III computer and Internet access to all Intel employees. Additionally the bundle does include printer, keyboard, mouse, monitor, office productivity software and technical support. "This program helps employees and their families participate fully in the Internet revolution and take advantage of the educational and e-Commerce opportunities offered on the Internet." [Ref. 20].

While the potential for telecommuting exists, Intel has stated no such premise as a vision or requirement for this program. Allowing total freedom of use (including, presumably, the ability to sell/pawn, etc. the computer) to the

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employee, Intel's actions appear to support their vision to raise computer skills expertise:

> We want our employees and their families to participate fully in the Internet revolution," said [Craig] Barrett [Intel CEO]. "An Internet-savvy workforce supports our mission to be the preeminent building block supplier to the worldwide Internet economy. We see these employer-based programs as a positive trend illustrating the importance of technology literacy to us all. [Ref. 20]

B.   ADVANTAGES TO INTEL

Intel exhibits a commitment to and presence in the school donation program and Intel stands to benefit from tax deductions available as a legitimate cost of doing business. The publicity that is generated for Intel may be a measurable benefit to them along with any tax implications for donating computing equipment to schools.

Regarding the Home PC Program, if Intel can increase public demand for PCs by challenging other companies to follow suit, then they benefit again: "We hope that many other companies will choose to offer such a program to enable their employees and families to experience the Internet and get ready for the connected e-home of the future." [Ref. 20]

An important element of the program is the freedom to use the hardware, software and Internet service for any means the employee desires. "Employees and their families are free to use the PC and Internet connectivity for any purpose they choose." [Ref. 20]

Another advantage to Intel employees will be their ready access to corporate information via their free computer and Internet access: "The Intel Home PC Program will allow employees to have secure access to information about corporate benefits programs, training, and communications via PCs and the Internet for employees and family members." [Ref. 20]

C.   POSSIBLE LESSONS FROM INTEL FOR THE NAVY

There are obvious differences between solutions that apply to Intel and those that apply to the Navy. Because of IRS Tax Code regulations, Intel may pursue avenues of disposal/donation that are different from those available to the Navy. No such tax incentive exists for the Navy. Since Intel can choose which school or school system to donate to, they can maximize their impact in a particular region, for example. Though the Navy, via Computers for Learning, donates a large number of PCs to schools (Appendix A, Part 4), the Navy's leverage to choose the recipients is small. Therefore, any positive public relations benefit available to Intel does not currently have a corollary in the Navy. Still there are similarities in the courses that Intel and the Navy have taken in computer disposal/donation.

The Navy's "PC For Every Sailor" program has many of the same goals as the Intel Home PC program. The "PC For Every Sailor" has not fared well during Navy budget considerations, however.

The income tax considerations for the employee (or sailor) might become an obstacle for an employer as they implement a computer giveaway program. Since the IRS may tend to treat any such tangible benefit as income to the employee, the fair market value of the computer system might show up on a 1099-MISC, for example. "Many of the details surrounding the new Intel Home PC Program are still being worked out, including the determination of tax liability incurred by the employee, if any." [Ref. 19]

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V. SOFTWARE ISSUES

In order for a computer, particularly a used PC, to be of any utility, it must be properly outfitted with software. Almost any used PC has a FMV well below the cost of software residing on that PC. Since no legitimate market exists for used software, there is no equivalent FMV for software. That is, FMV for software is essentially the price new. Therefore, a brief address of the issues related to software is appropriate.

In order for a free used PC to be of any utility to a sailor, it must come with a basic package of software. The benchmark computer in this thesis is a stripped PC, void of any software. Some software must be included in order for the PC to have any utility. There are a myriad of combinations of software that would meet the needs of an entry-level sailor. Perhaps a baseline package might include:

- Operating System

- Utilities

- Browser

- Spreadsheet, word processor, data base, graphics bundle

- E-mail client

Due to licensing agreements with software, normally it cannot be transferred with the PC but must be removed. Most software licensing agreements allow the software to be used on only one PC at a time. The DoD computer

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disposal practices normally involve removing all licensed software from the hard drive before the computer leaves the command. Special attention must be paid to PCs that have been used to process classified information. Once the operating system, utilities and programs have been removed, the PC can then be transferred, donated, etc.

Several DoD licensing arrangements currently exist that allow tools or utilities to be used on government computers. These licensing agreements generally allow for federal employees to use the software at home. Examples include anti-virus software, zip programs, and other utilities. If used PCs were made available for the DoD employees either by gift or sale, it would be a simple matter to expand our current licensing agreements to cover those PCs. Since the PCs once resided in government workplaces, it would not be illogical to assume that the software could simply remain on the PC as it is transferred to the member.

Some software manufacturers give a discount on large site license agreements if the customer meets certain criteria. If Microsoft declared the entire Navy an "educational institution," for instance, their fee for software as described above might be reasonable. The expense for the software, even on computers issued or given to recruits, would be borne by the DoD in order to qualify for the discount. As an example, NPS was able to purchase Microsoft© Office 2000 covering some 3,000 seats for $94,000 [Ref. 21]. The price was predicated on the vendor's declaration that the Naval Postgraduate School was an educational

institution, an imperative step in order to receive that expensive software for just over $30 per seat.

Software issues, while heavily regulated by copyright laws, should not be an inordinate obstacle for computer re-use. If a top-level initiative existed to get used PCs into the hands of the DoN employees, the public and congressional support as well as private sector participation (such as Microsoft declaring the Navy an educational institution), could combine to mitigate any software issues. Ramifications for future concerns regarding software and its licensing are beyond the scope of this thesis.

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VI.   FINANCIAL MANAGEMENT IMPLICATIONS

A.   NMCI and Leasing

The best environment that a fruitful discussion of the financial management applications can occur is under NMCI. Additionally, IT leasing is a growing trend in the fleet and the financial management implications for used PCs in the leasing environment are much the same as under NMCI. Due to the similarities between NMCI and leasing, for the purposes of this thesis, the discussion will focus on NMCI.

The massive computer disposal problem that now burdens the Navy and Marine Corps will no longer be ours to deal with. Under NMCI, *somebody* (the vendor) will likely have a disposal problem. Their equipment will depreciate and become obsolete at least as quickly as our current IT equipment, and due to the stringent contractual service level agreements (SLAs), the equipment may need replacing/refreshing at an even greater pace. As of April 2000, this was not a current topic in the competitive bidding process [Ref. 23] but could conceivably be addressed after contract award. Additionally, the current IT leasing initiatives that are gaining popularity throughout the fleet will result in the same disposal problem for the lessor (vendor). *The author proposes that the Navy and Marine Corps could provide a partial (if not complete) solution to the disposal problem the vendor and his subcontractors will have with NMCI.*

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First, we must assume a standard useful life of a PC to determine the rate and quantity that may be available from the vendor. If we assume the established tenet that a PC has a useful life of approximately three years, then the vendor will need to refresh or replace the PCs every three years. The author's personal experience and informal research has shown that it is generally better to replace a computer after three years than to upgrade/refresh. Any remaining warranty will expire at the three-year point and the actual depreciation (wear and tear) may make it economically unfeasible to upgrade. Lastly, the NMCI contract SLAs may be so stringent as to make upgrade more costly than replacement. For the aforementioned reasons and for uniformity of comparison, we shall assume a PC useful life of three years.

A good representation of that three-year-old computer might be our benchmark computer, the HP Vectra VL 5/100 MT that has a blue book value of $64 (used retail) [Ref. 16].

The NMCI contract will be let for approximately 360,000 "seats," which can be thought of as 360,000 PCs in this context. Based on the foregoing assumption that a PC will need replacing every three years, then 1/3 of the total PCs will become obsolete, or 120,000 per year (steady state NMCI, after DoN-wide implementation.) The vendor then has several options. He can "cascade" the computer within the organization by putting it to use in a capacity less stringent (SLAs permitting). Another option is to give the computer to charity and

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receive a nominal tax deduction. The option to discard the equipment exists although more and more municipalities are prohibiting such practice due to the hazards of the materials contained inside [Ref. 24]. A final option might be to simply give the computer to an employee. Because every transaction in a business has a cost, each computer disposal option has an associated price tag.

Relevant costs to the vendor associated with the four options, above, are [Ref. 25]:

Option	Cost per PC
Cascade within the organization	$397
Donate to charity/school	$343
Discard	$216
Give to employee	$173

So the estimated cost per year to the vendor under each disposal option could be calculated by multiplying the option cost per PC times 120,000 PCs per year. That is:

Option	Total annual cost
Cascade within the organization	$47,640,000
Donate to charity/school	$41,160,000
Discard	$25,920,000
Give to employee	$20,760,000

For uniformity, we will assume that the costs under all four options are considered normal costs of doing business and are tax deductible. Therefore, the after-tax cost (40% tax rate assumed) of each option to the corporation is:

Option	After-tax cost
Cascade within the organization	$28,584,000
Donate to charity/school	$24,696,000
Discard	$15,552,000
Give to employee	$12,456,000

Though a myriad of combinations of options exist, for ease of illustration, we shall assume that the vendor will exercise only one of the options at a time. Examining each option yields some interesting insight.

Cascading the computer (keeping it within the organization) is the most costly and yet might seem the best use of the asset. When considering the useful life of a PC, especially in the context of SLAs that may be too stringent to allow old PCs to remain in service indefinitely, this option makes little sense to a vendor under NMCI.

Donating the computer to charity appeals to some and it might be the option most vendors would readily consider but the costs to donate are nearly twice those to simply give it to an employee! Naturally, a corporation would receive a tax deduction equal to the fair market value of the computer. Recall that our example computer is valued at $64. That is approximately one-fifth the cost to

the vendor for the transaction. The tax benefit to the corporation would be the marginal corporate tax rate times the value of FMV of the donation. That is, $120,000 \times .40 \times \$64 = \$3,072,000$. The tax benefit, however, does not make up for the difference between donation and the next two options. Donating the equipment to charity would include some positive public relations and those might be reason enough (financial implications aside) to choose that option.

Discarding the computer can be a costly alternative if an environmental regulation is inadvertently violated. Public trust could be damaged in that regard. In light of a growing movement against such actions, tossing the used PC in the dumpster is not a likely choice.

Giving the computer to an employee is the least costly option of disposal. *Note the after-tax savings for the NMCI vendor who gives the computer to an employee rather than donating it. He could stand to save some $9.2 million per year! (24.7-3.1-12.4).* Alternatively, by giving the PCs to employees, the NMCI vendor could save $3.1 million over throwing the PC away. The uniformed and civilian members of the Navy and Marine Corps could make a ready market for such an initiative. Though not technically an employee of the vendor, the DoN employee is the closest (physically) to the equipment and best fits the model and cost estimate for giving the PC to employees. While the vendor would have employees of his own, the cost (packaging, transporting, storage, distribution) to re-direct the used PCs to his employees would likely be greater than $173. In

terms of logistics costs to the vendor, giving the obsolete NMCI PCs to the DoN employees may be more akin to donating to a charity. The costs to the vendor would be less than $343, however, since the PC could go home with the DoN employee with minimal packaging, transporting, storage and distribution. Giving the computers to the employees would eliminate any warehousing, transportation, and packaging costs associated with other options. Lastly, the morale and retention benefits could be a positive factor for the DoN.

1.   A Variation on Option Four

A slight twist on giving the computers to the DoN employees might be to sell them instead for some portion of FMV. Recall that our sample computer is valued at $64 (used retail), $34 (mint wholesale), and $18 (average wholesale) [Ref. 16]. Let's further assume that the cost to the vendor to sell the computer is the same as the cost to give it away. If that computer were offered for sale to the DoN employees, for instance, at mint wholesale FMV ($34), the vendor could cut the transaction cost to $139 per machine ($173 - $34). Assuming the $34 is considered income to the vendor, the additional after-tax annual savings to the vendor would be $2,448,000 (120,000 computers x $34 x .6). If the vendor instead offered the used PCs to the DoN employees at average retail FMV ($64), his additional after-tax annual savings would increase to $4,608,000. Perhaps NMCI could receive a reduction in cost/seat of NMCI in the following year for all or part of that net savings to the vendor. Since few people would expect a free

computer and one sometimes puts a greater value on that which has a price, selling the computers to the DoN employees might be a popular initiative. *Finally, by giving or selling obsolete computers to military and civilian members, we provide a solution to the vendor's disposal problem.* The result can be a WIN-WIN-WIN. That is, a win for the sailor who gets a functioning computer; a win for the vendor who has a ready, predictable market for his obsolete PCs; and a win for the DoN as the vendor's savings should translate into a credit on the cost of NMCI.

2.   Estimating Market Demand

Any vendor might want a commitment up front regarding the annual purchase of obsolete PCs before a discount on NMCI cost/seat could be assured. If the savings to the vendor are passed along to the DoN in the form of reduced cost/seat, however, it could merely be considered a windfall for both parties with no commitment from the DoN on exact numbers of computers its members might purchase. Nonetheless, the size of the DoN employee base should provide some comfort that every functioning computer will find a home, whether as a gift from the vendor or offered for purchase.

The DoN work force is comprised of:

	Navy	Marine Corps	Total
Active Duty	382,338	173,142	555,480
Ready Reserve	206,167	99,117	305,284
Civilian	207,601*	---------*	207,601
	Total		1,068,365

* Includes Navy and Marine Corps civilian personnel

The total DoN work force is 1,068,365 [Ref. 29]. Without any quantifiable data to forecast actual demand for 120,000 PCs per year, it seems a safe assumption that one in nine (1,068,365/120,000) DoN employees would be interested in receiving (free or by purchase) a used PC each year.

3. NMCI Transition Phase

During the period between current procedures and steady-state NMCI operations, a transition phase will exist. Due to the stringent contractual SLAs, some of the existing DoN equipment will not be usable in the NMCI environment. Whether the vendor who is awarded the NMCI contract will take title to all the DoN equipment or only take title to that equipment he chooses will determine the nature of the transition phase.

If the vendor does not take title to all the DoN IT equipment, disposal and re-use procedures (for that unneeded equipment) will remain the same as the ones in place today. There may, however, be a temporary glut in the amount of the

DoN IT equipment listed as excess through DITMS and eventually disposed of in the traditional fashion.

If the vendor takes title to all the DoN IT equipment, he will have an immediate need to dispose of a large amount not meeting the SLAs. Under those circumstances, new procedures may need introduction. The vendor can retain all the excess DoN equipment and dispose of it in a pre-determined fashion (which may not include considerations for the DoN employees.) Alternatively, the NMCI vendor can dispose of the excess DoN equipment as outlined above, at a cost savings to the vendor. Perhaps that cost savings can be translated into a reduction in the annual operating costs of NMCI charged to the DoN.

B. APPLICATIONS UNDER OTHER GOVERNMENT INITIATIVES

With recent legislation to equip every federal employee with a PC and initiatives for CyberSeabag to provide a laptop to every sailor, much momentum exists to put computers in the hands of our war fighting team. Our vast inventory of used, functioning computers might handily meet the need at a great cost reduction. Few employees should expect to be given a better computer to take home than the one they use at work. In today's austere fiscal environment, most would fully comprehend the economics and appreciate the equipment.

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VII. "COMPUTERS FOR WARRIORS"

Whether under current procedures or in the NMCI or leasing environment, what is needed in the quest to provide PCs to our service members is a readily identifiable program. Recently, in an article in Federal Computer Week, the Pentagon's plan to target recruitment and high-tech training was discussed [Ref. 27]. Perhaps "Computers for Warriors" could form a starting place for such a program. The title is a slight modification of a successful existing program, "Computers for Learning" where used federal computers are donated to schools. Although initiatives exist to purchase new laptop or desktop PCs for members of the military [Ref. 3], this thesis concentrates on the most effective use of the used, replaced assets.

A. VALUE OF A PC TO A SAILOR

With such a proposal, several issues arise:

- In order for the plan to attract warriors, one needs to determine the approximate demand for used PCs.

    - Without some semblance of demand estimate, we could miss the target audience by a wide margin. It is quite possible that the 17-19-year old potential recruit is more computer-savvy than we understand. His desire for a used Pentium I, for instance, might be negligible as his desire for exotic, memory-grabbing graphics could outpace the older PCs' capabilities. Data on recruits, potential recruits and the Delayed Entry Program are collected to measure if and why a recruit joins or does not join (and why he drops out of DEP). Appendix G contains a survey maintained by the Defense Manpower Data Center (DMDC) and could easily be

modified to collect data on the potential impact of a free, used PC on a recruit.

- The issue one must next address is the one of completeness or system integrity. With so many configurations of PCs in use within the Navy today, there could be many problems with uniformity of hardware.

  - A baseline configuration could be established such that all used PCs given to warriors would have commonality. In order for the equipment to have some level of future viability, the absolute minimum capability should not be the goal. In terms of the computers that are considered excess in some Navy commands, the baseline could be set at a Hewlett-Packard Vectra VL 5/100 or its equivalent. That HP model has a 100 MHz Pentium™ processor, 1.2G hard drive and 16 megabytes of RAM.

To the level that a minimum hardware system can be defined, perhaps it could include:

Necessities	Niceties
-CPU w/Pentium	-Printer
-Modem	-CD-ROM
-Monitor	-ZIP® drive
-Keyboard	
-Mouse	

- A computer void of software is of little value and may cost the recipient more to equip than a new system from a commercial vendor. In order for a free used PC to be of any utility to a sailor, it must come with a basic package of software.

  - First, as is currently the practice, all data and software must be removed from the PC hard drive (special regulations exist for handling PCs used to process and store classified data

[Ref. 5]). Then a basic package should be designed to go with the used PC in order to make it usable. There are a myriad of combinations of software that would meet the needs of an entry-level sailor. Perhaps a baseline package might include:

- Operating System

- Utilities (also available as freeware or shareware)

- Browser (freeware)

- Spreadsheet, word processor, data base, graphics bundle (some available as freeware such as Sun® StarOffice™

- E-mail client (Eudora Light is free)

- If the used PC is given to the sailor (rather than issued), he might incur an income tax liability (Form 1099-Misc.)

    - The difference between what the sailor paid for the PC and fair market value (FMV) might produce a taxable event. An additional concern might be the FMV of the software that could potentially boost the tax liability significantly. Obviously, if the used PC were given at no charge, that potential income tax liability would be maximized. The IRS has certain gift limitations and the amount involved would be well below the threshold and should not trigger any additional income tax. If there were a nationwide program established which provided computers for members of the military, such as "Computers for Warriors", an amendment to the tax code to permit such events to be non-taxable could be pursued. Under "Computers for Learning," there is no mention whether the individual recipient of the used PC incurs a tax liability.

B.   VALUE OF A PC TO A MOBILE FORCE

While there is high-level interest that a "PC for Every Sailor" is an initiative that will serve to increase our Navy's technical competence [Ref. 3], the value of that equipment to today's force should be explored. If sailors were to be given, issued or sold computers, whether new or used, they would be faced with a small logistics problem.   That problem would be greatly diminished if the computer were a laptop PC rather than a desktop PC. Since the current inventory of Navy PCs is mostly desktops, we should illustrate the sailors' problems associated with being given, issued or sold used desktop PCs.

When first entering basic training, there would be little need, time or space to set-up and operate a desktop PC. Therefore, at the new recruit juncture, it might not be practical to offer used PCs, regardless of the method.

As the new recruit completes basic training, he might enter a situation allowing the set-up of the computer. Depending on his initial assignment, he could find himself either on a ship or in a barracks situation. If assigned to a ship, the problem increases dramatically. On most USN ships, enlisted berthing is cramped, to say the least. Typically, a sailor is limited to the amount of gear that can fit in his "coffin" (a space about 10" deep directly below his mattress) and in his locker, which is about the same size as a small public school locker. On board ship, the sailor is virtually limited to the amount of gear that can fit in his sea bag. The imperative for the laptop PC becomes obvious under these circumstances.

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Since the inventory of used laptops within the military is limited, the likelihood of a widespread initiative to give, issue or sell used laptop PCs is slim.

With the likelihood of a deployment, the sailor may have an additional logistics problem: storage. If the barracks are unable or policy prohibits storing the PCs, his PC would then require storage along with any other personal gear he cannot take on deployment.

If the computer were his own personal property, however, a different dynamic would exist whereby the sailor could ship the equipment to a friend or relative. Since e-mail is commonplace on Navy vessels, he might then have e-mail connectivity with home where none was possible before. There are numerous commercial services available that offer free e-mail and/or web access so the equipment need not present a financial imposition on either the sailor (who has free e-mail aboard ship) or his relatives.

C. ADMINISTRATION OF "COMPUTERS FOR WARRIORS"

Existing laws and regulations do not allow the Federal Government to simply give title to property away to recruits for their own personal use. If that same gear were issued to the recruit instead, there is no legal impediment. In the manner that sailors are issued government-owned property for use in their official job-related capacities, a used PC could be issued for the term of enlistment or until the equipment reaches a set level of depreciation. For instance, when the computer is depreciated to a minimum level (perhaps average retail used FMV),

title could transfer to the recruit much like title would transfer to an individual at a DRMO auction. For title to transfer immediately to the recruit upon receipt (gift), perhaps the best conduit is the "Computers for Learning" program. Currently, eligible institutions, which include most schools, receive used PCs for use in educational pursuit. An interesting portion of the Executive Order is Section 3, paragraph c that states:

> Nothing in this order shall be interpreted to bar a recipient of educationally useful Federal equipment from lending that equipment, whether on a permanent or temporary basis, to a teacher, administrator, student, employee, or other designated person in furtherance of educational goals. [Ref. 15]

If "Computers for Learning" could be extended only slightly, used PCs could be given to new warriors in the same fashion that employees and others at eligible institutions can receive them. Clearly, a "permanent loan" (above) is tantamount to a gift. If a school can "give" a used Federal government PC to, for instance, a "student, employee, or other designated person in furtherance of educational goals," it seems a minor alteration of the program to allow for warriors to receive the same benefit. Assuming the PC would be used for furtherance of educational goals, and in concert with the Pentagon's goal of increased high-tech acumen in its warriors, modification of "Computers for Learning" might prove beneficial to both our recruiting efforts and our technical expertise.

Any additional burden that a program like "Computers for Warriors" would place on the civilian or military workforce is not one that is likely to be well

received. Rather, the administration of the program could be done on a volunteer basis. Much like Navy/Marine Corps Relief Society (NMCRS) or Volunteer Income Tax Assistance (VITA), capable and interested volunteers could run a program like "Computers for Warriors." With the growing segment of military retirees and their equally growing computer acumen and desire to expand their knowledge base, the resources they afford could be formidable. Like any such idea, a champion with a vision for patriotic participation would likely be the key to success.

D.   OTHER USES FOR "COMPUTERS FOR WARRIORS"

Re-cycled PCs could be installed in barracks for the permanent party personnel. That would, essentially, make the PC a part of the contents of the room just like the furniture. This initiative has merit in that it gets the PCs into the hands of those most likely to have need of them. Due to barracks room space limitations, there may be a limit of one PC per room. An issue of IT support would arise with PCs in barracks. That burden could not, realistically, fall on the base infrastructure, especially in light of NMCI. Rather, support would necessarily fall on the service members to handle as the need arises, perhaps in concert with volunteer assistance from the "Computers for Warriors" staff.

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VIII. PUBLIC PERCEPTIONS

A program where we either give or sell used computers to members of the DoN, whether uniformed or civilian, may receive public scrutiny. Perhaps the single most important element of a strong, positive public sentiment toward "Computers for Warriors," for example, will be the champion of the program. That champion must come from the highest levels of the national leadership. With all the initiatives to buy new computers for federal workers and for uniformed members of the military, it would seem that a public relations campaign for used computers would be unnecessary. Because of the widespread infrastructure that exists solely to make used military goods available to the public via donation and auction, there may be some public sentiment against such a program. If a usual recipient of surplus computers, for instance, foresees his ready source of equipment evaporating, there might be some public backlash.

With some active-duty military members receiving food stamps, a program like "Computers for Warriors" should not be a hard sell. Throughout the DoD, .45% of service members are on food stamps. For the Navy, the percentage on food stamps is approximately half that number, or .22% [Ref. 33]. There are 310,427 enlisted members in the Navy [Ref. 29]. Assuming that food stamps are used primarily by the lower enlisted pay grades, the number of affected Navy sailors is 683 (310,427 x .22%). Since lowest pay grade sailors are the ones most

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commonly targeted for computers [Refs. 3, 27], these 683 sailors could be a starting point for free used computers

Some additional considerations include:

A.   COMPUTERS FOR LEARNING

This program enjoys government support and publicity. The goals are considered worthy by many and in concert with closing the "digital divide." When the Navy implements NMCI, however, our participation in "Computers for Learning" will effectively cease. Since we cannot mandate where the vendor places his obsolete computers and his plan may not include donations to schools, we have already stated, by our proposed action, that replaced Navy PCs are no longer available for donation to "Computers for Learning." Having taken the politically sensitive (yet heretofore unpublicized) step of withdrawing from "Computers for Learning," the Navy should be free to implement "Computers for Warriors" with minimal concern for public outcry. Even by reducing the annual flow of used computers to "Computers for Learning" by some 120,000 (under NMCI), if properly marketed, the benefits to the DoN would be well worth the risk.

B.   RECRUITING AND RETENTION

Although not a topic of national debate, the military's concerns regarding recruiting and retention have received a great deal of effort and resources from the defense leadership. Additionally, Congress has recently passed pay raises in an

attempt to bolster the military's ability to attract and keep quality personnel. With the kind of attention and support (from both the legislative and executive branches) that has been seen lately, the support for any creative imitative to help meet our manpower needs should meet with favor. If a proposal can potentially improve our recruiting and retention efforts while cutting our costs, there is little likelihood of concern for public disapproval. Although NMCI is a pending program with no historical data, selling or giving obsolete NMCI computers to our war fighters could measurably improve our recruiting and retention, benefit the NMCI vendor and lower the annual cost per seat for the DoN.

C.   SELLING VERSUS GIVING

Though public sentiment might lean in favor of selling the used NMCI computers versus giving them to war fighters, there may be good reason to explore both options. When something is purchased, one tends to have a higher regard for it than if it were free but that is difficult to quantify and may differ for each individual.

If used NMCI computers were offered for sale to members, it might raise the logical question about why the public cannot participate in the purchase program, especially if a buyer in the private sector might be willing to pay more than "Computers for Warriors" would charge the war fighter. Therefore, giving the computers free of charge could actually result in greater public support.

D. SUMMARY

Public perceptions toward an initiative like "Computers for Warriors" where we give used PCs (under current procurement methods) or sell used PCs (under NMCI) to the DoN employees should be favorable. Depending upon the champion of such an idea, the merits of the program would fare well under scrutiny.

IX.   CONCLUSIONS AND RECOMMENDATIONS

A.   NMCI IMPLICATIONS

1.   Conclusion

Financial implications to the DoN under NMCI are quite large. Legal concerns currently associated with the transfer of used PCs to the DoN employees will be greatly diminished if not altogether eliminated. Additionally, the annual operating cost per seat could be less if the DoN were credited for the large savings the vendor could realize by selling or giving used PCs to the DoN employees.

Under NMCI, a potential computer disposal problem exists. Granted, the problem is not that of the US Navy or US Marine Corps. Nonetheless, under NMCI, computers will become obsolete and unable to meet contractually required service level agreements (SLAs). Under NMCI, computer disposal is still a problem but with creative planning, the Navy/ Marine Corps team could provide the solution.

2.   Recommendation

Within NMCI, a conduit for the DoN employees to purchase obsolete PCs from the vendor should be provided. In order to reduce the yearly seat cost under NMCI (although it will be a fixed-price contract), perhaps a credit could be issued to the DoN for each obsolete computer purchased by a member of the command.

If we could reduce the expense to the vendor by individually purchasing the obsolete computer gear, the vendor's disposal/donation problem is mitigated. An obvious alternative is to allow the vendor to give used NMCI PCs to the DoN employees; there would still be a savings to the vendor over other options.

B.   "COMPUTERS FOR WARRIORS"

1.   Conclusion

Under existing regulations, it is not feasible to get used PCs into the hands of war fighters.   Although some commands are sending excess computers home with the DoN employees, this is not widespread and, due to the disparity of IT assets between commands, not possible in all commands.

2.   Recommendation 1

Extend Executive Order No. 12999 ("Computers for Learning") to include "Computers for Warriors" and allow the DoD employees (uniformed and civilian) to take obsolete computers home. A model program with many lessons learned is the program developed by the DoN INPO. More elaboration on "Computers for Warriors" follows.

3.   Recommendation 2

Until such time as the necessary amendments are made to give (or issue) obsolete, functioning PCs to sailors, we should make maximum use of the DITMS excess catalog and diligently list all our excess equipment for re-distribution. Additionally, since NMCI will effectively curtail Navy participation in

"Computers for Learning," we should start now to discourage the current trend to declare PCs "unserviceable" and thereby side step the normal re-distribution channels. We should, instead, encourage far greater use of obsolete PC assets within the DoN long before we donate them to schools. In concert with modifying the "Computers for Learning" program to include "Computers for Warriors," the DITMS re-distribution priorities should be adjusted to insert "Computers for Warriors" as the new Priority 3, just below "Other DoD Agency." (See Table 1)

C.   INITIATIVES FOR NAVY RECRUITING

1.   Conclusion

The utility of a used PC to the Navy Recruiting Command as a recruiting tool is not high. Several of their staff commented that they would not be interested in giving used PCs to recruits [Ref. 26]. Even though the interest in used PCs as an inducement to enlist was not high, perhaps they could be used to help administer the Delayed Entry Program (DEP). The author was unable to get a definitive reading on DEP considerations within the Navy Recruiting Command.

2.   Recommendation 1

Used DoN computers could be provided to new enlistees in the DEP who are still at home and finishing high school or otherwise waiting six months or more for basic training. The percentage of DEP recruits in the program greater than six months is 25% [Ref. 34]. Possible benefits include:

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i. No storage/usage problems associated with basic training or shipboard spaces (at least not immediately).

ii. Opportunity for an enlistee to favorably present the Navy (and the PC program) to his/her peers, a potential boost to recruiting.

iii. If an enlistee were to drop from DEP, the PC would need to be returned. This imperative might enhance DEP retention.

3. Recommendation 2

Explore avenues to bolster our recruiting efforts with the use of replaced PCs. While Navy Recruiting Command representatives did not see a ready use for used PCs as an inducement to enlist, we should ensure that every recruiter has the IT assets necessary to fulfill his/her duties. The laptop computers they receive are a valuable resource but might fall short of the total IT needs of the local recruiting office. "Computers for Warriors" notwithstanding, until all Navy recruiters are properly outfitted with the level of IT assets requisite for the tasking, used PCs should not be directed elsewhere within the DoD. While older PCs might not be state-of-the-art, the IT needs of the recruiting office should not require the fastest current processors. The US Army Recruiting Command is planning to outfit its recruiting offices with PCs in order for potential recruits to play a type of "video game" that simulates many real life situations encountered during Army service [Ref. 22]. Perhaps used DoN computers could be used in a similar fashion.

D.   RECOMMENDATIONS FOR FURTHER STUDY

It might be instructive to "trace" our computer resources by placing stickers on all our IT equipment listing a point of contact at the Naval Postgraduate School (NPS). The sticker could request that the end user of the equipment contact NPS upon receipt. A database could then be built to document how long IT equipment is in the disposal process and its ultimate disposition.

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APPENDIX A.   DITMS STATISTICS

1.   DITMS IT Transfer Program by Defense Agency FY 98

2.   DITMS IT Transfer Program by Defense Agency FY 99

3.   DITMS IT Transfer Program by Defense Agency FY 00, through 20
       April 00

4.   DITMS IT Transfer Program for the Navy, FY 99

5.   DITMS IT Transfer Program, Fair Market Values

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DITMS Information Technology Transfer Program by Defense Agency

Fiscal Year 98

Items transferred to: Non-profit organizations
Minority Institutions
Pre-K through 12th grade schools
Historically Black Colleges and Universities

Agency	Quantity	FMV	Acq. Cost	% of Quantity
Air Force	2,694	$524,175	$2,939,492	8.90%
Army	14,221	5,499,340	18,402,580	46.98%
DARFA	61	38,653	96,632	0.20%
DCAA	3,076	765,471	3,099,474	10.16%
DFAS	1,144	408,558	1,150,174	3.78%
DIA	12	2,629	7,968	0.04%
DISA	541	182,405	552,696	1.79%
DLA	2,092	492,376	1,469,265	6.91%
DoD ELE	191	32,257	213,845	0.63%
DoDEA	392	64,163	192,183	1.29%
DSS	6	298	825	0.02%
DTRA	74	63,709	181,999	0.24%
JS	31	4,095	12,450	0.10%
Marines	189	32,294	188,962	0.62%
Navy	4,797	1,163,627	3,558,732	15.85%
OSD	743	199,069	643,498	2.45%
TSO	9	4,592	13,997	0.03%
Total	**30,272**	**$9,477,651**	**$32,617,772**	**100.00%**

DITMS Information Technology Transfer Program by Defense Agency

Fiscal Year 99

Items transferred to: Non-profit organizations
Minority Institutions
Pre-K through 12th grade schools
Historically Black Colleges and Universities

Agency	Quantity	FMV	Acq. Cost	% of Quantity
Air Force	24,100	$11,491,499	$32,444,050	23.12%
Army	39,872	43,223,217	114,605,660	38.25%
BMDO	1	1,013	2,533	0.00%
DCAA	516	289,725	762,844	0.50%
DFAS	2,191	957,552	2,537,431	2.10%
DISA	1,026	496,974	1,233,838	0.98%
DLA	12,350	3,569,896	9,897,069	11.85%
DoD ELE	1,782	1,472,190	5,656,913	1.71%
DoD IG	46	6,900	13,800	0.04%
DSS	450	123,928	386,949	0.43%
DTRA	426	466,854	1,120,114	0.41%
JS	129	29,360	85,717	0.12%
Marines	915	275,462	823,868	0.88%
Navy	16,424	5,854,418	18,372,235	15.76%
NIMA	3,029	1,119,374	5,123,887	2.91%
OSD	919	662,309	1,514,806	0.88%
TSO	65	35,178	88,538	0.06%
Total	**104,241**	**$70,078,869**	**$194,670,192**	**100.00%**

DITMS Information Technology Transfer Program by Defense Agency

Fiscal Year 00 through 20 April 2000

Items transferred to: Non-profit organizations
Minority Institutions
Pre-K through 12th grade schools
Historically Black Colleges and Universities

Agency	Quantity	FMV	Acq. Cost	% of Quantity
Air Force	12,870	$6,185,988	$17,544,115	28.02%
Army	13,769	6,801,952	18,683,295	29.97%
BMDO	129	73,163	223,266	0.28%
DCAA	369	122,498	318,362	0.80%
DFAS	3,040	1,400,565	3,394,258	6.62%
DISA	521	203,935	692,912	1.13%
DLA	5,432	2,001,541	5,151,157	11.82%
DoD ELE	201	85,487	197,695	0.44%
DoD IG	5	703	14,060	0.01%
DSS	205	49,206	140,923	0.45%
DTRA	247	112,020	365,100	0.54%
Marines	369	122,223	519,?	?%
Navy	6,192	3,067,?	8,778,?	13.4?%
NIMA	1,531	747,506	2,729,062	3.33%
OSD	559	546,389	1,161,492	1.22%
Total	**45,939**	**$21,580,571**	**$59,914,630**	**100.00%**

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DITMS Information Technology Transfer Program for the Navy

Fiscal Year 99

Destination	Quantity	FMV	Acq. Cost	% of Quantity
DRMS	19,454	$42,937,251	$108,158,669	51.33%
Intra-Agency (Navy)	1,706	834,536	2,027,346	4.50%
Other DoD	96	48,249	123,592	0.25%
Non-DoD Federal	220	218,450	455,381	0.58%
Schools and Non-Profit	16,424	5,854,418	18,372,235	43.34%
Totals	**37,900**	**$49,892,904**	**$129,137,223**	**100.00%**

FY98-2000 FMV for Disposed Navy/Marine Corp IT Assets
Acquisition Cost, Fair Market Value (FMV) and FMV percent

FY	USN Acq	USMC Acq	Total Acq	USN FMV	USMC FMV	Total FMV	FMV %
2000*	$8,779,946	$518,987		$3,067,398	$182,220		35%
1999	18,372,235	823,808		5,854,418	278,482		32%
1998	3,530,732	109,962		1,163,627	32,234		33%
Totals	$30,682,913	$1,452,757		$10,085,443	$492,936		33%

*FY 2000 through 20 April 2000

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APPENDIX B.   DITMS EXCESS CATALOG

1.   DITMS Excess Catalog

2.   Obtaining a Computer from the DITMS Excess Catalog

DITMS Excess Catalog

Search | Group by Component

Grouped by Component

OPT	Quantity	Component
	1	MAINFRAME SUPERCOMPUTER
List	4	MAINFRAME
	19	MAINFRAME MINICOMPUTER
	15	HANDHELD COMPUTER
List	4	PEN BASED COMPUTER
	33	SPECIALIZED SYSTEMS
	67	APPLE MACINTOSH
	141	WORKSTATIONS
List	37	WORD PROCESSORS/WORD PROCESSING EQUIPMENT
	27	UNIX WORKSTATION
	19	MULTIMEDIA WORKSTATION
List	160	DSKTP/TWR COMPUTER 286
List	1102	DSKTP/TWR COMPUTER 386
	2365	DSKTP/TWR COMPUTER 486
	1565	DSKTP/TWR CMPTR PENTIUM/COMPAT 60-133MHZ
List	54	DSKTP/TWR CMPTR PENTIUM PRO/COMPAT 150-200MHZ
	6	DSKTP/TWR CMPTR PENTIUM II/COMPAT 200-450MHZ
	2	DSKTP/TWR CMPTR PENTIUM III/COMPAT 450-850MHZ
List	25	PORTABLE COMPUTER 286
List	70	PORTABLE COMPUTER 386
	457	PORTABLE COMPUTER 486
	74	PORTABLE CMPTR PENTIUM/COMPAT 60-133MHZ
List	29	MACINTOSH LAPTOP
List	2	PORTABLE CMPTR PENTIUM PRO/COMPAT 150-200MHZ
	129	MULTIMEDIA (MM) DSKTP/TWR COMPUTER (CMPTR)
List	25	MM DSKTP/TWR CMPTR PENTIUM/COMPAT 60-133MHZ

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List	1	MM DSKTP/TWR CMPTR PENTIUM PRO/COMPAT 190-200MHZ
List	13	MM DSKTP/TWR CMPTR PENTIUM II/COMPAT 200-450MHZ
List	62	TAPE UNIT, REEL-TO-REEL
List	12	TAPE UNIT, CARTRIDGE
List	25	TAPE UNIT, CASSETTE
List	35	BACKUP TAPE UNIT PC
List	63	DISK DRIVE, DISKETTE/FLEXIBLE/FLOPPY
List	38	DISK DRIVE, PORTABLE
List	250	CD-ROM DISK DRIVE
List	99	FIXED/REMOVABLE DISK DRIVE
List	5	DRUM STORAGE
List	31	CD-ROM DISK DRIVE, RECORDABLE
List	3	OPTICAL JUKEBOX
List	5	DIGITAL VERSATILE DISK (DVD)
List	3	CD-ROM TOWER
List	355	MODEMS
List	67	MULTIPLEXORS
List	16	EXTERNAL FAX
List	10	EXTERNAL FAX MODEMS
List	1	DATA SERVICE UNIT\CHANNEL SERVICE UNIT
List	19	COMMUNICATIONS SPECIAL EQUIPMENT
List	11	CONTROLLERS, TAPE CONTROL
List	29	CONTROLLER, TERMINAL
List	60	FILE/NETWORK SERVER
List	42	ACTIVE HUB
List	7	BRIDGE
List	15	BROADBAND HI-LEVEL DATA LINK
List	154	ETHERNET LAN DEVICES/CARDS
List	6	GATEWAY
List	7	REPEATER
List	7	ROUTER/ATM HUB
List	10	UNIX SERVER

List	5	MODEM SERVER
List	7	FAX/MODEM SERVER
List	284	KEYBOARD
List	134	MOUSE
List	1	TRACKBALL
List	24	PC DOCKING STATION
List	8	MACINTOSH DOCKING STATION
List	7	SPEAKERS, MULTIMEDIA
List	14	VISUAL EQUIPMENT
List	2	DIGITAL CAMERA
List	6	DIGITIZER/GRAPHICS BOARD
List	1	GRAPHICS SYSTEM
List	30	IMAGE PROCESSING SYSTEM
List	2	SKETCHBOARD/SKETCHPAD
List	1	SLIDEMAKER
List	5	POWER CONDITIONER
List	9	POWER SUPPLY UNIT
List	49	POWER SUPPLY (UPS)
List	1	COLLATOR
List	39	READER, VIEWER APERTURE CARD
List	2	RECORDER/REPRODUCER
List	1	MAIN MEMORY BOARD
List	4	MEMORY CORE
List	3	RAM CHIP
List	24	BARCODE READER
List	53	FLATBED SCANNER
List	29	IMAGE SCANNER
List	63	LASER/SCANNER READER
List	20	MAGNETIC CARD ENTRY SYSTEM
List	4	MAGNETIC INK READER
List	14	OPTICAL CHARACTER READER
List	12	OPTICAL SCAN UNIT
List		

List	1	ANALOG INPUT/OUTPUT/MEMORY PROCESSOR
List	4	COAX SWITCH BOX
List	28	CONVERTER BOX/CONVERT DATA ANALOG/DIGITAL
List	4	DATA CONCENTRATOR
List	3	DATA TRANSMISSION EQUIPMENT
List	1	LOGICAL UNIT
List	59	SWITCHBOX/SWITCHING UNIT
List	10	TRANSCEIVER
List	359	COMMUNICATIONS CONTROLLER
List	1	DEGAUSSER
List	8	ANALYZER
List	2	OSCILLOGRAPH/SCOPE
List	1	SPOOLER, SOFTWARE
List	1	TAPE VERIFICATION SYSTEM, SOFTWARE
List	122	DATA COMMUNICATIONS, SOFTWARE
List	11	TELECOMMUNICATIONS, SOFTWARE
List	51	PC SYSTEMS SOFTWARE
List	206	PC APPLICATIONS SOFTWARE
List	19	PLOTTERS
List	83	LINE PRINTER
List	722	LASER PRINTER
List	610	DOT MATRIX PRINTER
List	91	INK JET PRINTER
List	5	BAR CODE PRINTER
List	7	FILM PRINTER/PALETTE
List	13	LASER PRINTER (COLOR)
List	26	INK JET PRINTER (COLOR)
List	20	PORTABLE PRINTER
List	13	THERMAL PRINTER
List	1	SOLID INK PRINTER
List	17	CONSOLE
List	6451	MONITORS
List	5	COLOR COMPUTER PROJECTOR

List	3	PRINTER TERMINAL
List	176	TERMINAL
List	62	MULTIMEDIA MONITOR (CONTAINS BUILT-IN SPEAKERS)

Obtaining a Computer from the DITMS Excess Catalog

1. Log onto the DISA web site at http://www.disa.mil/cio/darmp/excess.html

2. Register as a government agency. Each Navy command should have a designated command representative who is the POC for entry into DITMS.

3. Request to view items that have been reported to DISA as excess from the DoD units worldwide. The equipment will be listed and can be screened for a period of 30 days.

4. When an item of interest is located, a preference can be registered via the web. Additionally, it is recommended that a phone call be placed to the Equipment Control Officer (ECO) on the listing that holds the excess gear.

5. Once the request is approved by DISA and the ECO, it then becomes the gaining unit's responsibility for shipping and handling. This can be as simple as driving to the holding location for pickup or paying for freight via Fed Ex, UPS, etc.

The appropriate forms (DD Form 1149 or SF 122) are exchanged between ECOs transferring title between the commands

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APPENDIX C.   DRMS STATISTICS

1.   DRMS Fiscal Years 95-99 Statistics for IT Equipment (All DoD)

2.   DRMS Fiscal Years 95-99 Statistics for IT Equipment (U.S. Navy)

3.   DRMS Fiscal Years 95-99 Statistics for IT Equipment (Sales)

Defense Reutilization and Marketing Service (DRMS) FY 95-99 Statistics
Information Technology Equipment
All figures in dollars and based on Acquisition Value

FY	Turn-Ins	Reutilization	Transfers	Donations	Sales	Downgraded to Scrap	Unexplained	%
1999	$1,188,704,186	$34,864,038	$431,279,739	$14,254,184	$258,126,798	$197,959,937	$252,219,490	0.21
1998	963,657,914	60,870,114	152,650,954	11,664,685	422,836,492	291,239,333	24,396,336	0.03
1997	982,587,741	59,500,412	23,115,403	10,725,178	599,415,557	246,091,475	43,739,716	0.04
1996	1,133,051,957	61,727,211	5,847,610	12,719,826	795,565,749	321,940,298	-64,748,736	-0.06
1995	1,122,471,797	59,686,933	8,565,629	8,183,757	491,096,427	304,697,562	250,241,489	0.22
Totals	$5,390,473,595	$276,648,708	$621,459,335	$57,547,630	$2,567,041,022	$1,361,928,606	$505,848,294	0.09

Defense Reutilization and Marketing Service (DRMS)
FY 95-99 Statistics
Information Technology Equipment
All figures in dollars and based on Acquisition Value

	US Navy Statistics	
Fiscal Year	**Navy Turn-Ins**	**Percent***
1999	$267,773,510	23
1998	237,242,640	25
1997	241,398,812	25
1996	314,013,074	28
1995	163,264,251	15
Totals	$1,223,692,287	23

Percent of total IT equipment turned in by DoD for the respective fiscal year

Defense Reutilization and Marketing Service (DRMS)
FY 95-99 Statistics
Information Technology Equipment
All figures in dollars

Sales History

FY	# of Transactions	Acquisition Value	Sales Proceeds	% of Acq. Value
1999	81,275	$258,126,798	$1,701,153	
1998	164,080	422,836,492	3,664,713	
1997	236,914	599,415,557	4,939,940	
1996	186,625	795,565,749	4,391,932	
1995	87,482	$491,096,427	$2,061,881	
Totals		$2,567,041,023	$16,759,619	

APPENDIX D. DON INPO PROPERTY RECEIPT

INFORMATION NETWORK
Program Office

RECEIPT FOR 100 MHZ WORKSTATION
(INCLUDES CPU BOX, MONITOR, KEYBOARD & MOUSE)

BARCODE	SERIAL NO.	DESCRIPTION	QUANTITY
		HP Vectra VL 5/100 CPU	1
		Monitor	1
N/A	N/A	Keyboard	1
N/A	N/A	Mouse	1

THE SUBJECT EQUIPMENT IS BEING PROVIDED TO EMPLOYEES DESIRING TO WORK FROM HOME. EMPLOYEES DESIRING TO TELECOMMUTE MUST OBTAIN THEIR SUPERVISOR'S PRIOR PERMISSION.

THE SIGNING OF THIS FORM INDICATES THAT THE RECIPIENT ACCEPTS PERSONAL RESPONSIBILITY FOR THE APPROPRIATE CARE AND USE OF THE U.S. GOVERNMENT PROPERTY LISTED ABOVE. THE RECIPIENT ACKNOWLEDGES THAT THE ABOVE LISTED EQUIPMENT IS CURRENTLY IN GOOD WORKING CONDITION, AND AGREES THAT NO FURTHER MAINTENANCE OR SUPPORT OF SUBJECT EQUIPMENT WILL BE PERFORMED BY DONINPO.

EMPLOYEE DISPOSAL OF THIS EQUIPMENT IS NOT AUTHORIZED. RETURN OF THIS EQUIPMENT IS REQUIRED AS PART OF THE ORGANIZATION'S CHECKOUT PROCEDURES. ISSO WILL CERTIFY AT LEAST ANNUALLY THE RECIPIENT'S EMPLOYMENT STATUS AND CONTINUING REQUIREMENT.

PLEASE REFER QUESTIONS TO LCDR TERRI REISENEEED, GOVERNMENT PROJECT MANAGER @ 202-433-0713; OR VICTORIA O'MALLEY (CONTRACTOR) PROJECT MANAGER @ 202-433-0558.

RECIPIENT NAME	RECIPIENT SIGNATURE	DATE
ORGANIZATION	LOCATION	TELEPHONE
ISSO NAME	ISSO SIGNATURE	DATE
TECHNICIAN NAME	TECHNICIAN SIGNATURE	DATE

APPENDIX E.   LAWS AND REGULATIONS GOVERNING IT MANAGEMENT AND DISPOSAL

DoD 7950.1-M, Defense Automation Resources Management Manual

Published in September 1988, it refers to ARMS (now known as DITMS) and DARIC (now known as DISA) and lists their responsibilities and those of each DoD component with regard to managing, reporting, acquiring and disposing of IT equipment.

Draft DoD 8000.X-M, Defense Automation Resources Management Manual

Published in October 1994, it remains in "draft" status. It is supposed to cancel DoD 7950.1-M, above, and includes the new names for the programs and procedures to manage, report, share, acquire and dispose of IT assets.

SECNAVINST 5238.1C, Computer Resources Management

Published in April 1989, it directs all DoN activities to participate in the DARMP.

DoD 4160.21-M, Defense Materiel Disposition Manual

Published in August 1997, this manual designates the Defense Logistics Agency (DLA) as primary agency responsible for disposal and re-use of defense property. The manual specifically, however, names DISA/DARMP as solely responsible for Defense IT assets. The distinction is mentioned to highlight the unique nature of IT disposal and reuse within DoD.

32 Code of Federal Regulations, Part 736

Department of the Navy Disposition of Property guidelines giving authority to GSA for disposal of most DoN equipment.

40 United States Code, Section 471 - Federal Property and Administrative Services Act of 1949 (as amended)

Congressional declaration of policy for the Government to procure and supply, use, dispose and record property.

40 United States Code, Section 484

Congressional guidance giving GSA the supervision and direction over the disposition of surplus property. Includes Executive Order No. 12999, Educational Technology: Ensuring Opportunity For All Children in the Next Century (also known as "Computers for Learning")

15 United States Code, Section 3710

Congressional guidance on the use of Federal technology (applies mostly to national laboratories).

10 United States Code, Section 2576a

Lists guidelines for exchange of material and disposal of obsolete, surplus or unclaimed property to law enforcement activities, especially to activities involved in counter-drug or counter-terrorism.

Federal Property Management Regulation (41 CFR 101-43 through 101-46)

Prescribes the policies and methods governing the economic and efficient utilization of personal property, excess personal property, donation, sale, abandonment, destruction, and exchange/sale authority.

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APPENDIX F.   ACRONYMS

ARMS	Automated Resources Management System
CIO	Chief Information Officer
COTS	Commercial Off the Shelf
DARMP	Defense Automation Resources Management Program
DEP	Delayed Entry Program
DISA	Defense Information Systems Agency
DITMS	Defense Information Technology Management System
DLA	Defense Logistics Agency
DMDC	Defense Manpower Data Center
DNHN	Department of the Navy Headquarters Network
DoD	Department of Defense
DoN	Department of the Navy
DORRA	Defense Logistics Agency, Operations Research and Resource Analysis
DRMO	Defense Reutilization and Marketing Office
DRMS	Defense Reutilization and Marketing Service
ECO	Equipment Control Officer
FMV	Fair Market Value
FSS	Federal Supply Service
FTE	Full Time Equivalent

GSA	General Services Administration
HBCU	Historically Black Colleges and Universities
INPO	Information Network Program Office
IT	Information Technology
MHz	Mega Hertz
MI	Minority Institutions
NCTC	Naval Computer and Telecommunications Command
NMCI	Navy/Marine Corps Intranet
PC	Personal Computer
PCO	Procurement Contracting Officer
PEO-IT	Program Executive Officer for Information Technology
SLAs	Service Level Agreements
StRUT	Students Recycling Used Technology
TCO	Total Cost of Ownership
VITA	Volunteer Income Tax Assistance

APPENDIX G.   DMDC SURVEY

To move from one answer to another after each question, use the up or down arrow key.

Once you have selected your answer, press the "enter" key to record your selection and move on to the next question. Some questions will have more than one answer. Use the "enter" key to mark all the responses you want and use the up or down arrow keys to skip over those you don't want.
If you have any questions, please ask for assistance.

Please type in your last name. _____

Please type in your first name. _____

Please type in your social security number. (DO NOT USE HYPHENS)
_____

In what city are you taking this survey?
_____

In what state are you taking this survey?
_____

1. How did your first contact with the Navy occur?
   [] I called a recruiter
   [] I called 1-800-USA-NAVY
   [] I mailed a postcard
      expressing interest
      in the Navy
   [] A recruiter called me
   [] I visited a recruiter
   [] I met a recruiter at
      school or a job fair
   [] I met a recruiter
      somewhere else
   [] I responded via the
      Internet

2. When did this first contact occur?
   [] One |15 week| ago
      or less
   [] 2-3 weeks ago
   [] 1-2 |15 months| ago
   [] 3-6 months ago
   [] More than 6 months ago

3. Before your first contact with the Navy recruiter, how strong was your interest in joining the Navy?
   [] No Interest
   [] Some Interest
   [] Moderate Interest
   [] Strong Interest
   [] Very Strong Interest

4. How many times did you meet or speak with your Navy recruiter before today?
   [] 1 - 2
   [] 3 - 5
   [] 6 - 8
   [] 9 or more

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5. Which of the following people, if any, advised you to meet with a Navy recruiter?

                                                    (Mark all that apply)

[] Mother   [] Friend
[] Father   [] Navy delayed entry
[] Other family member   program (DEP) member
[] School Official   [] Someone/friend in other
     Teacher, Coach,   military service
     Counselor, etc.)   [] Recruiter from other
[] No one; I decided on   military service
     my own   [] Other   (Go to 5a)
[] Someone else in the Navy

5a. Who else advised you to meet with a Navy recruiter?

_____

6. After meeting with the recruiter, which of the following people, if any, had the most influence on your decision to join the Navy? (Mark all that apply)

[] Mother   [] Friend
[] Father   [] Navy delayed entry
[] Other family member   program (DEP) member
[] School Official   [] Someone/friend in other
     (Teacher, Coach,   military service
     Counselor, etc.)   [] Recruiter
[] Someone else in the Navy   [] Other

7. Has your recruiter met your parent(s)/guardian(s).
     [] Yes
     [] No

8. Is(was) your father or mother in the military?
     [] Yes
     [] No

9. Have you ever met or spoken with a recruiter from any other branch of the military?
     [] Yes
     [] No   (Go to 12)

10. Which branch(es)?   (Mark all that apply)
     [] Marine Corps   [] Coast Guard
     [] Army   [] National Guard
     [] Air Force

11. Of the recruiters you met or spoke with, which one did you come in contact with first?
     [] Air Force   [] Marine Corps
     [] Army   [] Coast Guard
     [] Navy   [] National Guard

12. Did you feel that you were contacted too much by military recruiters?
    [] Yes
    [] No   (Go to 14)

13. Which service(s) contacted you too much?   (Mark all that apply)
    [] Marine Corps   [] Air Force
    [] Army   [] Navy

14. For which of the following military services do you recall hearing, seeing or receiving any advertising recently:
(Mark all that apply)
    [] Navy   [] Marine Corps
    [] Army   [] All services in one
    [] Air Force   advertisement

The next six questions address advertising to which you may have seen or heard BEFORE you decided to enlist.   (For each question, mark all that apply)

15. I heard advertising on the RADIO for:
    [] Army   [] Air Force
    [] Navy   [] Marine Corps

16. I saw advertising on the TELEVISION for:
    [] Navy   [] Marine Corps
    [] Air Force   [] Army

17. I saw advertising in the NEWSPAPER for:
    [] Air Force   [] Army
    [] Marine Corps   [] Navy

18. I saw advertising in a MAGAZINE for:
    [] Marine Corps   [] Navy
    [] Army   [] Air Force

19. I saw advertising on the Internet for the:
    [] Navy   [] Marine Corps
    [] Air Force   [] Army

20. I received MAIL from:
    [] Army   [] Marine Corps
    [] Air Force   [] Navy (Go to 20a)

20a. How did you respond to the direct mail you received from the Navy?
    [] Nothing, did not   [] Looked at the website
         respond to   (www.navyjobs.com)
         direct mail   [] Called the recruiter
    [] Sent the enclosed   [] Stopped by the
         reply card   recruiting station
    [] Called 1-800-USA-NAVY   [] Other   (Go to 20b)

20b. If other, How did you respond to the mail?

_____

_____

**Please indicate below how much influence each type of advertising had
on your decision to join the Navy**

21. Radio advertising.
    [] No influence   [] Strong influence
    [] Some influence   [] Very strong influence
    [] Moderate influence

22. Television advertising.
    [] No influence   [] Strong influence
    [] Some influence   [] Very strong influence
    [] Moderate influence

23. Newspaper advertising.
    [] No influence   [] Strong influence
    [] Some influence   [] Very strong influence
    [] Moderate influence

24. Magazine advertising.
    [] No influence   [] Strong influence
    [] Some influence   [] Very strong influence
    [] Moderate influence

25. Internet advertising.
    [] No influence   [] Strong influence
    [] Some influence   [] Very strong influence
    [] Moderate influence

26. Information received in the mail.
    [] No influence   [] Strong influence
    [] Some influence   [] Very strong influence
    [] Moderate influence

27. Do you recall the Navy's advertising slogan?
    [] Yes (Go to 27a)
    [] No (Go to 28)

27a. Enter the slogan or as much of it as you can recall.

_____

_____

_____

28. Of which of the following clubs/groups, if any, have you been a member?. (Mark all that apply)

[] Boy Scouts
[] Girl Scouts
[] Sea Scouts
[] Organized team sports
[] High school activities
   other than sports
   (band, honor society)
[] Navy JROTC
[] Other service JROTC
[] National Guard Youth
   Challenge
[] Volunteer work

[] Explorer Scouts
[] Naval Sea Cadet Corps
[] Martial Arts
[] YMCA/YWCA
[] Civil Air Patrol
[] Young Marines
[] Amateur "ham radio"
[] Future Farmers of
   America and/or 4-H
[] NRA marksmanship
[] Religious youth group
[] Other (Go to 28a)

28a. What other group(s) have you belonged to?

---

29. Which of the following events, if any, did you attend before you decided to enlist in the Navy? (Mark all that apply)

[] Blue Angel air show
[] US Navy Band concert
[] Leap Frog (Navy
   Parachute Team)
   performance
[] Tour of a Naval
   facility
[] Tour of a Naval vessel

[] Cruise on a Naval
   vessel
[] Open house at a
   military base
[] Other service military
   band
[] Other service air show

30. Listed on the next screen are some of the reasons why people enlist in the military. Please read through all the reasons and rank the TOP THREE REASONS you decided to join the Navy.

    Record your responses by typing a 1in the box beside the most important reason, a 2 in the box beside the second most important reason, and a 3 in the box beside the third most important reason.

[]To travel
[]To get money for
  college
[]To get trained in a
  skill
[]To earn more money than
  I do now
[]To develop self-
  discipline
[]To serve my country

[]To attend college while
  in the Navy
[]To get benefits
[]To provide for my
  family
[]Navy Core Values
  (honor, courage,
  commitment)
[]To find adventure

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30a. What other reason(s), if any, did you have for enlisting in the Navy? *

_____

_____

31. Understanding that first impressions are important and that the recruiting station may be your first exposure to the Navy, we are interested in making your experience at the recruiting station as pleasant as possible.

Mark all the features that are important to you (i.e., the characteristics whose presence or absence would influence your decision to join the Navy).

[] Safe location
[] Available parking
[] Convenient business hours
[] Close to a major highway
[] Close to public
       transportation
[] Easy to find
[] Well-lighted office space
[] Close to High School

[] Clean office space
[] Uncramped/uncluttered
     office space
[] Climate-controlled office
     space
[] Attractive furnishings
[] Comfortable furnishings
[] Professional atmosphere

32. Did you know where the recruiting station was located without having to ask or look it up?
       [] Yes
       [] No

33. When you spoke to the classifier earlier to choose a Navy job (rating), did the classifier offer you a job in the Nuclear Field Program?
       [] Yes
       [] No   (Go to 35)

34. Did you take the Nuclear field job (rating)?
       [] Yes   (Go to 35)
       [] No

34a. Why did you not take the job in the Nuclear Field?
_____

_____

35. If you had your choice, when would you prefer to begin active duty in the Navy?
       [] Immediately
       [] Sometime this month
       [] Sometime next month
       [] 2-3 months from now

       [] 4-5 months from now
       [] 6-11 months from now
       [] 1 year or more from now

36. Do you plan to work on a college degree during this enlistment?
       [] Yes
       [] No

37. How would you like the Navy to help you achieve your education goals? (Choose one)

    [] Nothing, I am satisfied with my current education
    [] Pay part of tuition cost
    [] Montgomery GI Bill / Navy College Fund
    [] Flexible work hours to go to school
    [] Having a "Navy Community College" program
    [] Earning a degree would increase chances of promotion
    [] Payment assistance for existing school loans
    [] Other (Go to 37a)

37a. What other way(s) would you like the Navy to help with your education goal

_____

_____

38. How do you plan to prepare for bootcamp? (Mark all that apply)

    [] Nothing   [] Mental preparation
    [] Go to DEP meetings   [] Study Navy Training
    [] Exercise   Materials
    [] Stop or reduce smoking   [] Other (Go to 38a)
    [] Wake up earlier

38a. How else do you plan to prepare for bootcamp?

_____

_____

39. During the past two months, how often did you exercise or play sports?

    [] Never   [] More than 5 times per
    [] 1 or 2 times per week   week
    [] 3 to 5 times per week

40. Do you smoke cigarettes?
    [] Yes
    [] No

40a. Are you aware of the Navy's no smoking policy at bootcamp?
    [] Yes
    [] No

41. Which of the following TV networks do you watch regularly? (Mark all that apply)

    [] ABC   Television)
    [] BET (Black   [] Comedy Central
       Entertainment   [] CBS

[] Telemundo   [] The Sci-Fi Channel
[] ESPN   [] UPN
[] ESPN 2   .   [] VH1
[] FOX   [] TBS Superstation
[] Fox Family Channel   [] TNT (Turner Network
[] Galavision   Television)
[] MTV (Music Television)   [] USA Network
[] NBC   [] Univision
[] Prime Sport   [] WB Network

42. Which of the following television programs do you watch
regularly? (Mark all that apply)

[] Pensacola Wings of Gold   [] Unhappily Ever After
[] Malcolm and Eddie   [] Monday Night Football
[] Dawson's Creek   [] The Simpsons
[] Living Single   [] Steve Harvey
[] Hercules/ Xena   [] College Football
[] The Wayans Brothers   [] Sportscenter |
[] Snow Boarding   [] Bay Watch
[] Arena Football   [] Professional Hockey

42a.   What other TV shows do you watch?

_____

43. Does/Did your high school have Channel One broadcasts?
        [] Yes   (Go to 44)
        [] No

43a. When Channel One was broadcast, did you:
        [] Watch it with full attention
        [] Watch it while doing homework, reading & doing other
              things
        [] Didn't watch it

44. Have you ever browsed the World Wide Web on the Internet?
        [] Yes
        [] No (Go to 50)

44a. Approximately how many hours per week do you use the Internet?

        _____ Hours

45. Have you ever visited a home page for one of the military
services?
        [] Yes
        [] No (Go to 46)

45a. Which services' home pages have you visited?
        (Mark all that apply)

[] Air Force   [] Marine Corps
[] Army   [] Navy

46. Which of the following, if any, scholarship sites have you visited on the World Wide Web? (Mark all that apply)

        [] Fastweb.com
        [] CollegeClub
        [] CollegeNet
        [] Other (Go to 46a)

46a. What other scholarship sites do you access on the Web?

_____

_____

47. Which of the following world wide web search engines do you use regularly? (Mark all that apply)

        [] Alta Vista   [] Web Crawler
        [] Excite   [] Yahoo
        [] Infoseek   [] None / Don't know
        [] Lycos   [] Other (Go to 47a)

47a. What other world wide web search engine do you use?

_____

_____

48. Which of the following world wide web sites do you access regularly? (Mark all that apply)

        [] WarnerBrothers.com   [] MSNBC.com
        [] ESPNSportsZone.com   [] NFL.com
        [] NBA.com   [] Sony.com
        [] Hotmail.com   [] INAME.com
        [] MTV.com   [] WWF.com
        [] GeoCities.com   [] Other   (Go to 48a)

48a. What other web sites do you access regularly?

_____

_____

49. Which of the following, if any, job search sites have you visited on the world wide web? (Mark all that apply)

        [] America's Job Bank   [] Yahoo Career and Job
        [] Career City   Search Service
                                   [] Career Mosaic
        [] Online Career Center   [] Monster Board
           (occ.com)   [] None / Don't know
        [] Job Web   [] Other (Go to 49a)

49a. What other job search sites have you used?

_____

_____

50. Do you use email?
[] Yes
[] No

50a. Did you ever exchange email with your recruiter?
[] Yes
[] No

51. Which of the following magazines have you read in the past SIX MONTHS? (Mark all that apply)

[] 4 Wheel & Off Road
[] Jet
[] Fast Times
[] Popular Hot Rodding
[] Sporting News
[] PC Gamer

[] Playstation Magazine
[] Popular Science
[] Rolling Stone
[] Scholastic
[] Maxim

51a. What other magazines have you read in the past SIX MONTHS?
_____

52. Before coming to the MEPS, did you receive any promotional items such as a baseball cap, pencil, mug, etc. that advertised for the Navy?
[] Yes
[] No   (Go to 53)

52a. Did the promotional item(s) have an affect on your decision to join the Navy?

[] No, the item(s) did not affect my decision to join.
[] Yes, the item(s) were a small factor in my decision to join.
[] Yes, the item(s) were a big factor in my decision to join.

53. It is important for us to show our appreciation to you, the new recruit. Overall, do you feel that you received first class treatment and a first class Welcome Aboard to the Navy at the MEPs?

[] Strongly agree
[] Somewhat agree
[] Neither agree nor disagree

[] Somewhat disagree
[] Strongly disagree

54. Did you receive a Navy ball cap and t-shirt after being sworn in to the Navy?

[] Yes, I received a Navy ball cap and t-shirt
[] I received a Navy ball cap only
[] I received a Navy t-shirt only

[] I received neither a ball cap nor a t-shirt
[] I have not been sworn in yet

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55. Did your recruiter adequately prepare you for your MEPs processing to include reviewing the "Navy, How You Can Join" booklet, completing the pre-processing forms, and telling you what to expect?

> [] Yes, I was fully informed by me recruiter.
> [] I was somewhat informed by my recruiter.
> [] I was only informed by sources other than my recruiter.
> [] No, I had no idea what would happen at the MEPs.

56. It is important that you be treated with dignity and respect during the entire recruiting process. We are interested in making your experience at the MEPs as pleasant as possible. Listed below are a number of MEPs features. Please indicate whether or not all aspects of these features were First Class.

Were all aspects of the following features First Class?

Arrival time at the MEPs
[] First Class   [] Adequate   [] Needs Improvement

Meals at the MEPs
[] First Class   [] Adequate   [] Needs Improvement

ASVAB Testing
[] First Class   [] Adequate   [] Needs Improvement

Treatment by MEPs personnel
[] First Class   [] Adequate   [] Needs Improvement

Job Classifier was professional and knowledgeable
[] First Class   [] Adequate   [] Needs Improvement

Waiting time between each process
[] First Class   [] Adequate   [] Needs Improvement

Hotel accommodations
[] First Class   [] Adequate   [] Needs Improvement

Paperwork
[] First Class   [] Adequate   [] Needs Improvement

Physical testing
[] First Class   [] Adequate   [] Needs Improvement

Comfortable furnishings
[] First Class   [] Adequate   [] Needs Improvement

Professional furnishings
[] First Class   [] Adequate   [] Needs Improvement

All questions answered
[] First Class   [] Adequate   [] Needs Improvement

All concerns addressed
[] First Class   [] Adequate   [] Needs Improvement

57. Do you have any comments on how you were treated at the MEPS?

_____

_____

THANK YOU FOR YOUR TIME!

GOOD LUCK IN YOUR NEW JOB!

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